

AMERICAN **Getting Started in the Martial Arts**

# SURVIVAL

THRIVE  
IN THE

**WILD**

**GUIDE**

Vol. 5 Issue 8

HOW TO OVERCOME NATURE'S  
MOST EXTREME LOCATIONS

## TRACKING BASICS

Techniques for the Modern Scout

## SHADOW MAN

How to Move Undetected

## WATER BASICS

A Survivor's Guide to Hydration

## SIGNAL MIRRORS

The Underrated Kit Piece

## TRAIL-READY SCORPION

PKS' New 9-inch Beast

## P220 HUNTER

SIG Sauer's New 10mm Pistol

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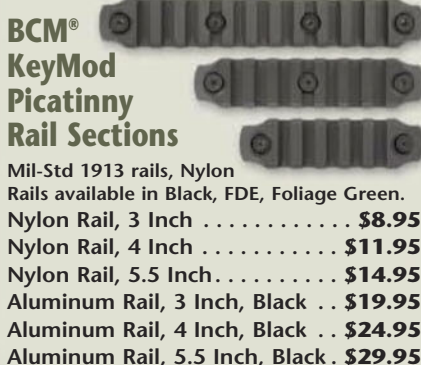
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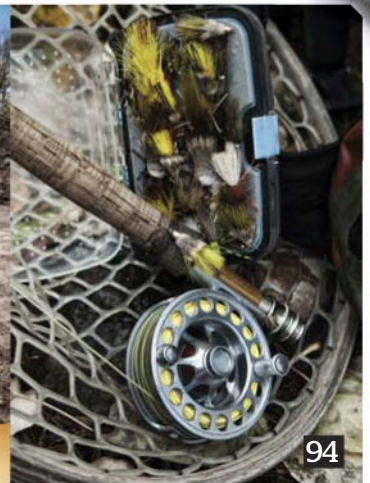
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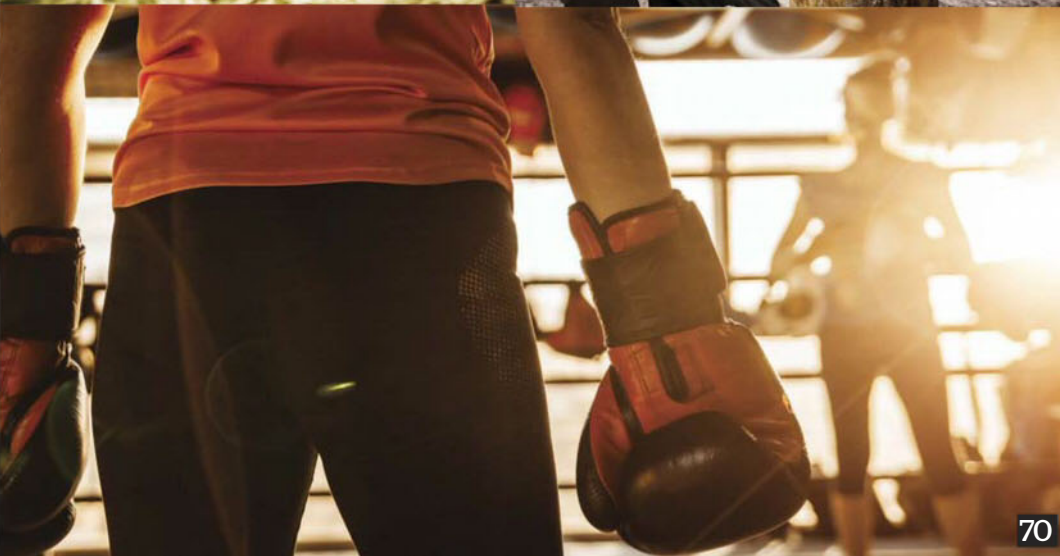
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# WORDS

## USE YOUR BRAIN

**T**he wilderness of the world is beautiful ... and dangerous. Its vastness and majesty attract us to the unspoiled wilderness areas. But dangers lurk everywhere, exacerbated by our over-enthusiasm and impatience.

Perhaps the most significant way to reduce the odds of our being victims is to follow the old Scouting dictum: *Be prepared*. Be prepared mentally by researching the dangers you might encounter in a given area, and be prepared physically by making sure you have what is needed for the terrain and the season.

In "Build a Custom Wilderness Survival Kit" (page 22), Keith Farrar tells us how to customize a survival kit for our own personal needs so we can avoid the trap of simply purchasing an "off-the-shelf" survival kit. A survival kit is not all that complicated, and it is better to assemble one yourself. When you think through all the basics of what it takes to survive, you'll stand a better chance of finding items that fill your personal needs.

I've never forgotten a field trip during which everyone showed the contents of their kits. These kits weren't necessary "survival kits," because they contained whatever we'd need for the next week. But if confronted with an emergency, every one of us would be living out of our packs with whatever we happened to have—as well as our wits.

One man's pack was exceptionally heavy, and he had every possible gadget you could want. Everything was carefully hand picked, expensive and top quality. That was good, but the weight made it difficult for him to walk very long before having to rest.

Another pack contained various items that the owner didn't know how to use.

"So, why did you include them?" I asked.  
"Because it was on the list of survival kit items," he admitted, a bit sheepishly. This included first aid items he had no idea how to use or, for that matter, what they were used for. Including these types of items in your pack effectively make for dead weight.

Another friend once showed off his top-of-the-line orienteering compass that had all the possible bells and whistles. However, he admitted he had no idea how to use it.

"Really?" I asked. "So, why are you carrying it?"  
His answer: "Because everyone knows you should carry a compass."

Remember: Your best survival kit is your brain, and that means your knowledge, skills and experience are far more important than the stuff you carry. Yes, carry stuff, but know how to use it.

Besides Keith Farrar's excellent piece about survival kit components, Kevin Estela shares how he planned a trip to Alaska ("Geared for Alaska," page 36) and what gear he selected. He will do a follow-up article after his trip.

Other good articles include information regarding how to improve your skill making fire with a hand drill, tracking basics, survival fishing and more.

Our view at *American Survival Guide* is that we do not hide our heads in the sand. We look at the world objectively, as best we are able. And we do our best to provide viable solutions to each and every survival issue that continues to dog and threaten us. That includes the gear we need in our cars and homes, the gear we need in the wilderness, as well as our very day-to-day mindset.

That's who we are.

**Christopher Nyerges, Editor**



# DARKNESS

## IS COMING



Fire, flood, hurricane, tornado, earthquake, terrorism, nuclear/biological/chemical, destruction, panic. These disasters present lethal challenges in daylight. They are compounded by darkness. Are you ready? TNVC is the only place to obtain all the necessary low light and no light gear to not only survive, but endure and prevail when disaster strikes. Don't be caught in the dark!

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# PRODUCTS

## NEW

1

### Multitasker Series3 AR-15 / M4 Multitasker

Instead of going the cost-saving route, the Multitasker knife is made of solid billet steel material. The G10 scales are commonly used for tactical knives, but on this tool, they ensure a nonslip grip surface. The titanium carbonitride treatment on the pliers makes it rust-resistant and maintenance-free, allowing you to perform tasks on your AR. The M4 Multitasker uses only the best materials, so you'll be thankful to have invested in a quality piece.

#### FEATURES

- CNC-machined pliers
- 3/8-inch hex for LaRue mounts
- 1/2-inch hex for scope rings
- Carbon-tipped scraper
- 1/4-inch magnetic bit driver
- Includes commonly used hex bits

**MSRP:**  
\$139.95

**URL**  
[www.SKDTac.com](http://www.SKDTac.com)

2

### BCM Gunfighter Stock Mod 0

According to the manufacturer, the Gunfighter is the strongest lightweight polymer stock available on the market. There are no sharp edges, preventing tangles of the rifle with the shooter's sling or MOLLE gear. The VBOST (vehicle-borne operations sling tab) is the most common application when operating inside a vehicle. It secures the shooter's sling against the stock when the carbine is not in use.

- **FEATURES**
- Snag-free design
- VBOST
- Two different ambidextrous sling mounting options
- Available in black, flat dark earth, foliage green and wolf gray

**MSRP:**  
\$55.95

**URL**  
[www.BravoCompanyUSA.com](http://www.BravoCompanyUSA.com)

3

### Spyderco Paramilitary 2 Knife

Spyderco is always looking to revamp its products to be more ergonomic and have a higher cutting performance. The Paramilitary 2 Knife's G-10 handle is narrowed at the end to improve handling, while the blade is thinner. In addition, uncomfortable angles have been removed. It's ambidextrous-friendly and given a larger lanyard for carry. This Spyderco knife is sharper, smoother and guaranteed to provide performance and user comfort.

#### FEATURES

- Overall length: 8.281 inches
- Steel: CPM S30V
- Weight: 3.9 ounces
- Handle: G-10
- Plain edge

**MSRP:**  
\$204.95

**URL**  
[www.Spyderco.com](http://www.Spyderco.com)

4

### Rotopax 2-Gallon Fuel Pack

These Rotopax tanks do not allow fuel to dispense until you apply light pressure against the tank. Their new design features a C.A.R.B./Eco spout that eliminates gas spills, making needless mess a thing of the past. Strap this fuel pack to your vehicle or carry it to the gas pump via its ergonomic handles. Having a few of these cans in your camp or with your crew will prove to be life-saving to you and your vehicle when you are miles away from the next fuel station.

#### FEATURES

- Dimensions: 18.5x13.5x3 inches
- 1 standard pack clip
- Multiple color options
- C.A.R.B./Eco spout

**MSRP:**  
\$79.95

**URL**  
[www.Rotopax.com](http://www.Rotopax.com)

5

### Midland ER102 Windup Radio With AM/FM

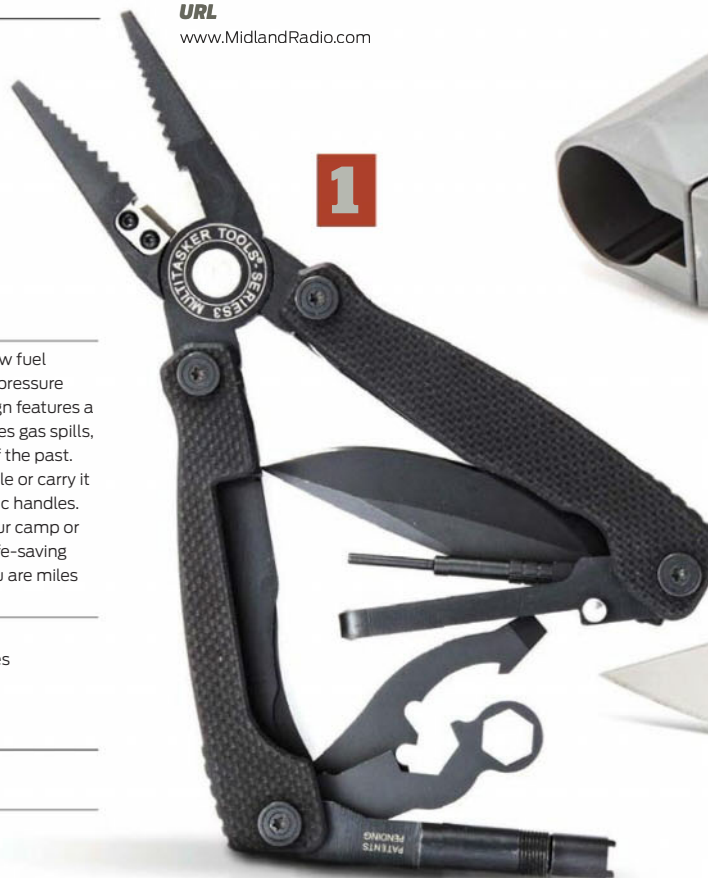
The Midland ER102 Windup Radio is designed to work with batteries if needed. However, the radio also features a fantastic Dynamo crank that gets it up and running after just a few cranks. The crank powers the radio, as well as serving as a charging device for electronics. This radio also offers a built-in flashlight and LED screen. It has a USB connector for your devices, and the LED screen will keep you informed via all NOAA hazard alerts and local AM/FM broadcasts.

#### FEATURES

- Water-resistant AM/FM radio
- NOAA weather channels
- Dynamo windup crank
- Radio and flashlight
- USB connector to charge electronic devices
- Dimensions: 3x8x6 inches

**MSRP:**  
\$59.95

**URL**  
[www.MidlandRadio.com](http://www.MidlandRadio.com)





6

## ReFactor Tactical Operator Band

Hailed as the first band designed to fit the needs of Special Ops personnel, this tactical band is designed to give you multiple components you could need in a survival situation. Start a fire, catch your food and build shelter—all with the items included in the ReFactor Tactical Operator Band.

The fishing line doubles as a snare for trapping food and the band includes a compass option with waterproof casing. And, after all the things you can do with this band, it can do even more: The band comes with a hidden handcuff key, allowing users to escape from restraint.

### FEATURES

- Small size fits up to 6.5-inch wrist
- Medium size fits wrists between 6.5 and 7.5 inches
- Large size fits wrists between 7.5 and 8.5 inches
- Compass option
- Live fire firecord
- 12 feet of 550 paracord
- 30 feet of 80 pounds test spider wire fishing line
- Hidden handcuff key buckle

### MSRP:

\$49.95–\$73.95

### URL

[www.RefactorTactical.com](http://www.RefactorTactical.com)

4



6



2



5

3







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# PRODUCTS

## NEW

7

### Suunto MCB NH Mirror Compass

Out in the wilderness, you're likely to find no cell phone service. Without a topography map, seeing the sun or checking which side of a tree moss is growing on, a compass should be on your person at all times. The Suunto MCB NH Mirror Compass is balanced for the Northern Hemisphere and also features a mirror, in case you need to signal attention in your direction. Never again get lost trekking with this two-in-one compass.

#### FEATURES

- Mirror for accurate direction taking and signaling
- Compact
- Weight: 1.27 ounces
- Limited lifetime warranty
- High-grade steel needle

#### MSRP:

\$32

#### URL

[www.Suunto.com](http://www.Suunto.com)

8

### ReFactor Tactical Blasting Cap

The Refactor Tactical blasting cap was designed for true comfort. Refactor Tactical has included an ID patch inside of different explosives for quick reference to avoid any ballistic accidents.

The most notable advancement is the infrared patch for night operations; this patch can be taken off when not in use. The cap is built on a flexfit mesh platform that increases ventilation and cools the operator during intense activity.

#### FEATURES

- 3.5x2-inch hook-and-loop patches sewn on front and back
- 1x1-inch IR hook-and-loop patch sewn on top
- 1x1-inch IR hook-and-loop patch sewn inside
- VS-17 panel sewn inside for signaling
- Flexfit platform means increased comfort

#### MSRP:

\$29.95

#### URL

[www.RefactorTactical.com](http://www.RefactorTactical.com)

9

### Zippo 4-in-1 Woodsman

The Woodsman 4-in-1 should be in every outdoorsman's tool kit. Not only does it save you the hassle of bringing four different tools that only serve one purpose, this compact and lightweight multi-axe will also serve your most essential needs. Set up shelter by either hammering in, or pulling out, stakes on a tent. Saw down tree limbs for a makeshift tent or hack them down for firewood. The saw can be detached and replaced, making it safe in your hands and sharp on the field.

#### FEATURES

- Saw blade
- Hammer
- Tent stake-puller
- Weight: 2.6 pounds
- Dimensions: 20.3x 8.6x1.6 inches

#### MSRP:

\$64.99

#### URL

[www.Cabelas.com](http://www.Cabelas.com)

10

### Exotac MatchCap XL

Why bother dealing with wet matches? The Exotac MatchCap XL watertight container protects your matches from the elements, keeping them in pristine condition for when you need them most. Not only does this kit include regular matches, but it also has stormproof matches for when you just can't dodge the rain.

The XL design gives it a 250 percent increase in striking surface (compared to the original model) and allows you more room to store tinder, water purification tablets, first aid bandages and more. The durable MatchCap XL is very easy to carry and has the option to be attached to a pack via its machine-grooved loop or a carabiner.

#### FEATURES

- Kitchen matches: 40
- NATO matches: 32
- Stormproof matches: 25
- Strikes: 25 to 50 per pad
- Length: 3.6 inches

#### MSRP:

\$31.95

#### URL

[www.Exotac.com](http://www.Exotac.com)

11

### Mainstay 3600 Emergency Food Ration

This almost universally used emergency food ration is a great alternative to the bulkier MREs. Approved by the U.S. Coast Guard and the Department of Defense, this emergency ration has come a long way since the days of dried, fatty meat. Each 3600 ration contains nine 400-calorie meals in individualized portions, making it easy to track how much food you have left in your kit. You can buy this food ration as a single item or in a case of 10.

#### FEATURES

- Five-year shelf life
- Nonthirst provoking
- Withstands temperatures between -40 degrees (F) and 300 degrees (F)
- No cholesterol or tropical oils
- U.S. Coast Guard and Department of Defense certified
- Kosher and halal

#### MSRP:

\$6.95 (one ration); \$59.95 (one case/10 rations)

#### URL

[www.AdventureSurvivalEquipment.com](http://www.AdventureSurvivalEquipment.com)

12

### Major Surplus Desert Shemagh

Protect yourself from wind, sand and sunlight. Sometimes known as a scarf, *keffiyeh* or *yashmag*, it has many uses. This shemagh is even durable enough to wrap up your gear into a pack. Don't let the elements get the better of you.

#### FEATURES

- Dimensions: 42x42 inches
- Color: Desert Sand
- Weight: 0.35 pound

#### MSRP:

\$9.99

#### URL

[www.JaxMercantile.com](http://www.JaxMercantile.com)





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11



8



10



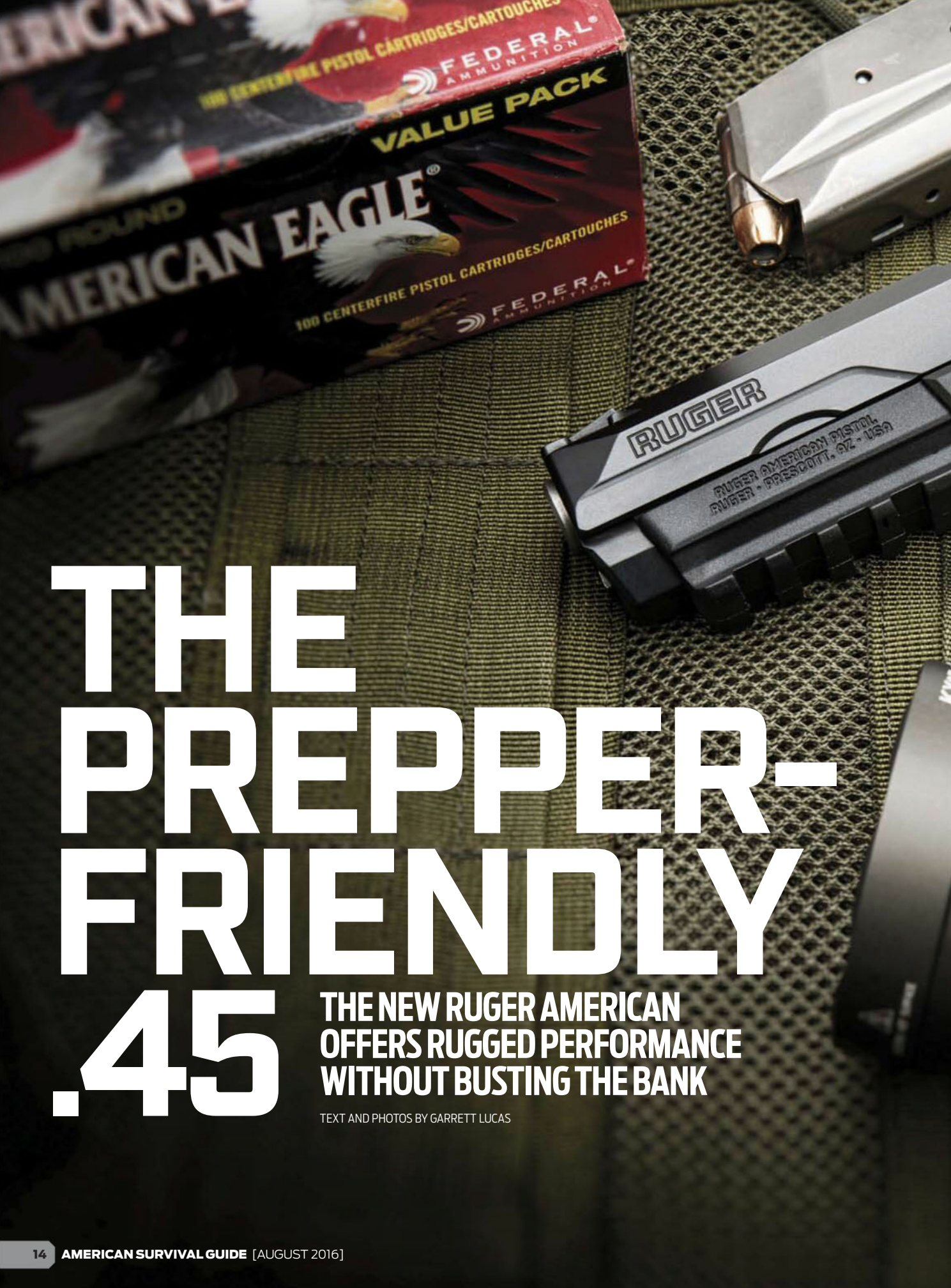
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7







# THE PREPPER- FRIENDLY .45

THE NEW RUGER AMERICAN  
OFFERS RUGGED PERFORMANCE  
WITHOUT BUSTING THE BANK

TEXT AND PHOTOS BY GARRETT LUCAS







› After shooting, it's a good idea to clean your weapon. Disassembly of the Ruger American is extremely easy: Lock the slide back, drop the magazine, and flip the takedown lever in a downward position. Push the slide forward off the frame of the pistol. Make sure nothing is loaded first.

***"... THE RUGER AMERICAN IS A ROBUST PLATFORM THAT IS ACCURATE, RELIABLE AND EASY TO MANAGE BECAUSE OF THE SWAPPABLE WRAPAROUND GRIP MODULES AND THE RECOIL-REDUCTION CAM."***



**T**he process of getting "prepared" can be overwhelming at times. It isn't a hobby you do on the side; it's a whole lifestyle. It also requires you to focus on all aspects of living, instead of just zooming in on one thing.

You have to be able to acquire stock-piles of all types of products, including food, water, batteries, clothing, cooking materials, first aid items, seeds, batteries and other power supplies, as well as all the tools required in order to have a self-sufficient lifestyle.

Now, think about having enough of all of that to last a few years or more!

That's an expensive undertaking, and we haven't even talked about self-defense gear yet. Living this type of lifestyle requires extra scrutiny to be paid for the money spent and value received for each item you decide to add to the household's stores.

I recently had some time with one product whose value-to-expense ratio will stand up to even the most rigorous examination.

#### **THE ALL-AMERICAN .45 ACP**

The 2016 SHOT show was chock-full of new products, but one that got a little

extra buzz was the new Ruger American pistol. I think many folks were surprised by the new line, given Ruger's attention to its SR series of pistols.

The first caliber offering by Ruger was in 9mm Parabellum, and while I was intrigued by the new pistol and wanted to give it a try, I decided to hold off until Ruger decided to bring out any new calibers. I didn't know when that might be, but it didn't take long for the company to have the .45 ACP model available to try. In fact, it was about three months after the initial introduction. Running it through the paces was definitely a must-do process then ... because what's more American than .45 ACP?

All of Ruger's products are made in the U.S.A. So, for new buyers, the "American" name shouldn't be construed as the reason for the moniker. Instead (at least from my perspective), it delineates the evolutionary leap forward from the SR line of pistols. While there are certain design similarities and other cues that

point to the SR series as part of its heritage, there are enough new aspects of the Ruger American pistol to name this new species of pistol.

The overall specifications of the .45 ACP version of the Ruger American are a bit different than the 9mm version. Instead of an overall length of 7.5 inches and a barrel length of 4.2 inches (like the 9mm version), the .45 ACP model has an overall length of 8 inches and a barrel length of 4.5 inches. It also tips the scales at 31.5 ounces, as compared to 30 ounces for the 9mm.

With a height of 5.7 inches and a width of 1.4 inches, along with the other mentioned specifications, the .45 American isn't exactly built for concealed carry. It's a duty-sized pistol that will serve well for home defense or for those who might use it for their work.

The grip frame is constructed of glass-filled nylon, while the slide is fashioned from stainless steel. Added to the mix are Novak LoMount 3-dot sights and a black



› Right: The .45 ACP offering has two grip modules that can be interchanged to accommodate users with bigger or smaller hands.



› The controls on the Ruger American are well thought out and built with a lean toward more-ergonomic handling.



## Ruger American .45 ACP

› OVERALL LENGTH: 8 inches

› BARREL LENGTH: 4.5 inches

› HEIGHT: 5.70 inches

› WIDTH: 1.4 inches

› WEIGHT: 31.5 ounces

› CALIBER: .45 ACP

› SIGHT TYPE: Novak LoMount 3-Dot

› FINISH: Black nitride

› MAGAZINE CAPACITY: 10

› MSRP: \$579

SPECIFICATIONS

nitride finish. Factor in the Picatinny rail for accessories, and you've got a whole lot of gun for an MSRP of just \$579 ... and we haven't gotten to the performance part yet!

### ERGOS AND MECHANICS

Like other manufacturers of polymer/nylon framed guns, Ruger takes the end

user into account by providing two wraparound grip modules with the .45 American. The 9mm comes with three modules, but with the size of .45 rounds staggered into a magazine, only two modules were feasible. The American came with the medium-grip module installed, and I found it fit my hand better

than the large module.

With the relief in the front strap behind the trigger guard, the user is able to get a high grip on the firearm for better controllability. In conjunction with the low bore axis, that high grip helps provide a more natural pointability with the weapon and definitely assists with mitigating



**“THE AMERICAN CAME WITH THE MEDIUM-GRIP MODULE INSTALLED, AND I FOUND IT FIT MY HAND BETTER THAN THE LARGE MODULE.”**

➤ Although still displaying some of its ancestry, the Ruger American is a nice step forward with a fresh design and more in-demand features.



◀ The .45 ACP American is an intimidating package, which includes its 4.5-inch barrel, large bore and the ability to hold up to sustained +P fire.

◀ The Ruger American sports a Picatinny rail for the addition of aftermarket accessories.



➤ Shown here are the ambidextrous slide and magazine release for left-handed shooters, along with a visual of the texturing on the front strap that ensures a secure purchase on the pistol.



muzzle flip and perceived recoil.

Within the trigger guard, Ruger has a trigger overtravel stop placed at the bottom and behind the trigger to prevent unnecessary rearward movement once the striker has been engaged. While the reset is both audible and has a tactile response, it was a bit longer than I've recently encountered with similar pistols but really nothing to throw up your skirts about.

Honestly, I was a little surprised at the trigger pull on the Ruger American pistol. There's just a little pre-travel before resistance is felt, but the trigger breaks cleanly at a nice 5.75 pounds. For a pistol of this type, with the only safety being the trigger tab, the 5.75-pound pull is right in the sweet spot between too heavy and, "Sorry; my bad ..."

Another feature worth noting is the ambidextrous nature of the magazine release and the slide release. This is a definite plus for left-handers, especially without an external safety (except the trigger tab), because that allows the user to manipulate all necessary controls during combat or practice with just the left hand.

The takedown lever is located on the right side, but any time that control is used should be just for regular maintenance. Disassembling the pistol for cleaning is extremely easy, with no "gotchas" in play.

### FIELD TRIALS

As with anything else, just because it looks good doesn't mean it's going to do the job, so we took the Ruger American

**"... IT'S NOT ONLY  
A REAL VALUE FOR  
THE WALLET; IT'S  
A STRONG VALUE  
FOR THE USER'S  
PEACE OF MIND."**

**VELOCITY &  
ACCURACY**

## Ruger American .45 ACP

AMMUNITION	VELOCITY	ACCURACY
Federal Premium HST 230-grain +P	917 fps	2 1/8 inches
Winchester PDX1 230-grain	932 fps	2 9/16 inches
Hornady Critical Duty 220-grain +P	1,008 fps	2 3/4 inches
Remington Golden Saber 230-grain	881 fps	2 3/16 inches
Federal American Eagle 230-grain FMJ	821 fps	2 3/4 inches

*Note: Velocity—five-shot average tested at 10 feet from muzzle, measured in feet per second. Accuracy—shot offhand at 15 yards at a rate of one round per second.*



## SOURCE

► STURM, RUGER & CO., INC.  
(336) 949-5200  
WWW.RUGER.COM

## ***“DISASSEMBLING THE PISTOL FOR CLEANING IS EXTREMELY EASY, WITH NO ‘GOTCHAS’ IN PLAY.”***

out for a real test drive. Having a good supply of Federal Premium's 230-grain FMJ American Eagle rounds on hand was just the ticket to get the testing started.

The Ruger comes with two 10-round magazines, and as we took turns shooting the American with one magazine, the next person would be loading up the other. This wasn't a dash to shoot all the rounds as quickly as we could; it was meant to get a good number of rounds downrange to test for function and reliability and to get a feel for how the pistol handled.

After going through 200 rounds, we were pretty impressed by the feel of the pistol, its shootability and by its accuracy, as well. The .45 ACP American did seem

the top-shelf ammo (that gets expensive!) and only experienced one failure to feed early in the batch. It was with the 220-grain +P Hornady Critical Duty load. This would normally make me a little nervous, but I experienced the same issue with the same lot of Critical Duty ammunition with my personal .45, which had never failed in close to 5,000 rounds until that point and hasn't failed to feed since. I think I just got a bad box. It happens.

However, the Ruger American chewed through the rest of the rounds (including the Critical Duty) without pause. Throwing out the one failure because of recent experience with that load, I would feel confident using the American as a tool for self-defense.

What really took me back in time during

Although not the most exact way to test for accuracy, measuring how I shot off hand gave me an understanding of how the Ruger American would perform for me in a real-world scenario ... sort of. There's more to accuracy than just firing it from a bench; ergonomics are involved. How the weapon sits, feels and lines up for the individual are just as important, and I think Ruger has a rock-solid design on its hands.

### **THE VERDICT**

Upon studying the attention to detail Ruger paid, and after both handling and shooting the Ruger American, one would be hard-pressed to believe this is one of the least-expensive full-size .45

to be a soft shooter. Whether that was a result of the recoil-reduction cam or just the ergonomics was hard to tell, but it was very controllable, even while doing double- or triple-taps.

The next phase of testing the Ruger American was to try it out with a few premium self-defense loads. We had the 230-grain Remington Gold Sabre, 230-grain +P grain Federal HST, 220-grain +P Hornady Critical Duty and Winchester 230-grain PDX1. These are currently popular rounds for self-defense and seemed to be a good litmus test for the Ruger American.

In total, we fired close to 200 rounds of

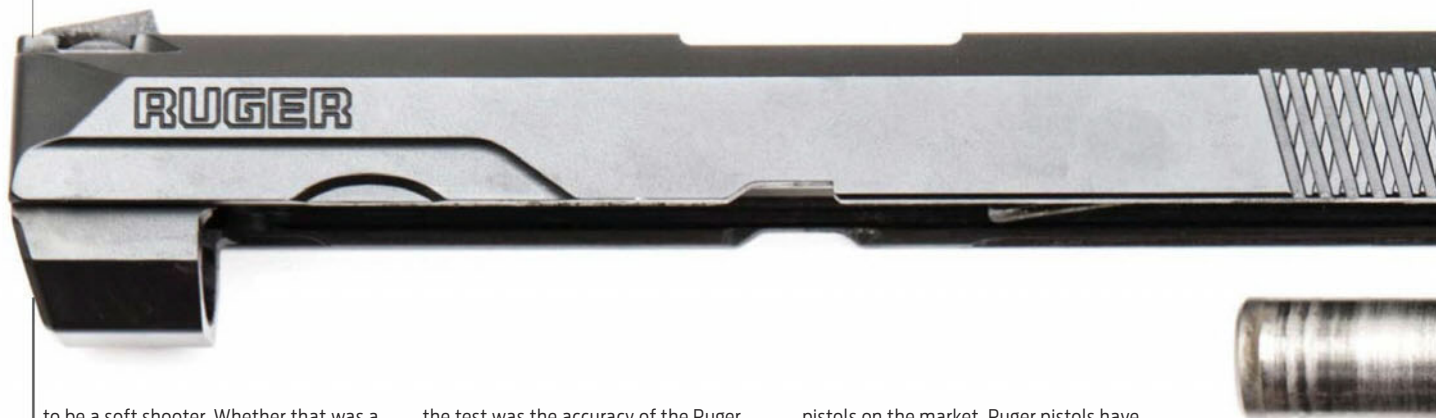
the test was the accuracy of the Ruger American. I remember shooting Ruger's KP90 20-odd years ago, and it was one of the most accurate out-of-the-box pistols I'd ever tried. Shooting the American was a similar experience.

Just shooting off hand at a rate of one round per second, I was able to get groups just a hair over 2 inches at 15 yards. The longer sight radius of the 4.5-inch barrel helped with easily staying on target. The best group of the day was with Federal Premium's 230-grain +P HST load. It came in at just 2 inches, but a couple of others were very close (see the accuracy results table on page 19).

pistols on the market. Ruger pistols have always been known for their reliability (not necessarily their aesthetics), but I think they've turned that corner with the American.

Price aside, the Ruger American is a robust platform that is accurate, reliable and easy to manage because of the swappable wraparound grip modules and the recoil-reduction cam. Tested to stand up to sustained +P ammunition being fired—which many manufactures won't claim—it gives the reader a bit of an idea of how solidly this weapon is put together.

Take the street price into account, and





› The Ruger American comes with Novak LoMount sights that provide an excellent sight picture and are highly visible.



› There was a bit more recoil with Federal Premium's +P HST loads, but it was still easily managed by the shooter; and the recoil impulse was not as dramatic as expected.



you've got a budget-friendly weapon that's a perfect choice for the price-conscious prepper. And given its performance during this review, it's not only a real value for the wallet; it's a strong value for the user's peace of mind. **ASG**

› After the slide has been removed from the American, the basic parts are accessible to the user for easy maintenance.



# KEEP IT PERSONAL

## PUT A PERSONAL SPIN ON THE ITEMS YOU INCLUDE AND HOW YOU CARRY THEM

STORY BY KEITH FARRAR  
PHOTOS BY JOE FARRAR

**T**alking about building a wilderness survival kit usually opens up a can of worms, because there are so many opinions about what should be carried in this kind of kit. Years back, when I first got involved in the outdoors, there were literally hundreds of lists telling me what to carry in my survival kit.

You can easily find a multitude of ideas, lists and videos telling you what to carry in your survival kit. There are also pre-made survival kits available that run the gamut from inexpensive commercial kits to extremely expensive kits with hand-picked, high-quality items. The choices are endless.







Children's Allergy  
Rapid Melt  
Each tablet contains:  
Diphenhydramine HCl 12.5 mg  
Fold along perforations;  
peel back at arrows;  
push product through foil.  
Mfg. by LMK International, Inc.  
Hauppauge, NY 11788  
LOT# P88267  
EXP. DATE 02/16

EXP. DATE 02/16  
LOT# P88267  
Mfg. by LMK International, Inc.  
Hauppauge, NY 11788  
Fold along perforations;  
peel back at arrows;  
push product through foil.  
Mfg. by LMK International, Inc.  
Hauppauge, NY 11788

1.FOLD  
2.PULL  
EXP. DATE 02/16  
LOT# P88267  
Mfg. by LMK International, Inc.  
Hauppauge, NY 11788



## **“THE BEST ITEMS FOR YOUR KIT ARE THE ONES YOU ARE COMFORTABLE CARRYING, ARE FAMILIAR WITH AND KNOW HOW TO USE.”**

As a result, the process of selecting appropriate items or putting together a kit can become overwhelming, especially for those who are new to the concept of carrying a wilderness survival kit.

Keeping a survival kit personal is essential, because there are endless discussions about which items are best to carry. The best items for your kit are the ones you are comfortable carrying, are familiar with and know how to use.

### **RULES OF THREES**

When I started teaching wilderness survival to the Scouts, I wanted to simplify the process of assembling a survival kit. I was looking for a way to keep the process organized, easy and complete. I also wanted to empower the Scouts to make their kits personal (which means carrying the items that work for them) and not select items from a list created by someone else.

The system I use to teach kit-building is based on the “priorities of survival.” It’s a concept I learned a long time ago from the late Ron Hood. Although I have made a few additions to his concept, the system is solid, simple, organized and complete.

This system is the “Rules of Threes” for survival—referring to the top priorities in a wilderness survival situation.



◀ The author shows students the types of knots used for tying up a shelter. (Photo by C.Nyerges)

- ◀ **YOU CAN LIVE 3 SECONDS WITHOUT HOPE.**
- ◀ **YOU CAN LIVE 3 MINUTES WITHOUT AIR.**
- ◀ **YOU CAN LIVE 3 HOURS WITHOUT SHELTER.**
- ◀ **YOU CAN LIVE 3 DAYS WITHOUT WATER.**
- ◀ **YOU CAN LIVE 3 WEEKS WITHOUT FOOD.**

If you address each priority and put the proper items you have selected in your kit, you will have assembled a complete wilderness survival kit.

Let’s look at the concept behind each priority and consider the items that can be included in your wilderness survival kit to facilitate that priority. (Keep in mind that an entire article could be written about each priority.)

◀ **HOPE:** The idea of living only three seconds without hope comes down to a positive mental attitude (“PMA,” as some survival instructors call it). Of course, you won’t die within three seconds if you don’t have a positive attitude. However, giving up hope from the start will greatly diminish your odds of survival.

Not having hope can cause the loss of motivation needed to do the things you should do to facilitate your safety and rescue. Hope and PMA are great motivators, and having a positive attitude is the reason some people with absolutely no wilderness survival training have survived for several days as they awaited rescue. They had a strong will to live.

**Kit items:** Family photo; *Bible* and/or anything that will give you the will to live and continue on.

◀ **AIR:** Air is a metaphor for life-threatening injuries. Of course, if you are underwater and drowning, air is clearly an issue of concern. However, this priority is also about first aid issues, such as severe bleeding or any life-threatening injury.

**Kit items:** A first aid kit with items you are familiar using, in addition to the ability to recognize signs and symptoms of life-threatening injuries. Take a wilderness first aid

◀ The author discusses the value of a mylar blanket at a survival seminar (photo by C. Nyerges)



◀ Here is the tarp all set up in a “winter configuration,” which will allow the use of a fire in front of the shelter.



course, and gain the knowledge. Important items I rarely hear survival instructors mention is at least two days' worth of your prescription medications.

❗ **SHELTER:** This priority addresses "thermoregulation" (keeping your body core temperature at 98.6 degrees Fahrenheit). According to search-and-rescue statistics, "exposure" is the number-two killer in the wilderness (second only to catastrophic falls). Hypothermia (low body core temperature) and hyperthermia (high body core temperature) are life-threatening conditions that must be ameliorated quickly.

**Kit items:** Maintaining your body core temperature is easier than raising or lowering it. With this priority, we have to address shelter, as well as fire. Proper clothing, including a hat, is your first line of defense against the elements. Personal shelters include things such as emergency mylar blankets, emergency mylar ponchos, emergency bivvies and large, heavy-duty trash bags.

Emergency shelters can be constructed with tarps, reflective tarps, natural materials (debris shelters) and by taping two large trash bags together (carry some duct tape). A knife and some cordage can come in handy if you will be working on natural shelters. As for fire, you should carry a lighter, stormproof-type matches, a firesteel and some type of tinder that will easily catch a spark from a firesteel.

➤ This tarp setup easily fits into a small day pack and can provide you the needed shelter in an emergency.



◀ The contents of the "Fanny Pack" kit: Survival tin, cordage, SOL emergency poncho, clear plastic trash bags and a water bottle sling to carry your metal water bottle



◀ Contents of the Neck Knife Kit: Knife, firesteel, compass, petroleum jelly cottonballs, signal mirror, whistle, signal mirror, water bag, water purification tablets, sewing needle and thread, button flashlight





### ◀ **SIGNALING AND COMMUNICATION:**

If you are lost or have a condition (such as a broken leg) that does not allow you to continue, you need the ability to signal and communicate for help. This priority should be addressed after the hope and air priorities. It is on par with the shelter priority.

Consider putting your signal mirror and whistle around your neck for easy access while addressing the shelter priority. If you have a PLB (personal locator beacon) or have cell phone service, you can communicate electronically for rescue.

**Kit items:** Signal mirror, whistle, PLB, flagging tape (to leave a “breadcrumb” trail) for search-and-rescue personnel.

◀ **NAVIGATION:** This priority is best addressed after the water priority. If you are sure no help is coming, you will have to navigate your way back to civilization.

**Kit items:** Compass, map, along with the knowledge of “natural navigation” methods.

◀ **SLEEP:** Sleep is a priority that is not often discussed. Not sleeping for one night is something most of us have experienced—and you know the lagging effects it has on your thought process. Two nights without sleep will really impair your decision-making ability—something you don’t want in a wilderness survival situation.

Other issues you might encounter with sleep deprivation: memory loss, anger, hallucinations and slurred speech. Sleep

hyperthermia and then address the water priority.

Two issues you will need to deal with are finding water and treating the water.

If you can find water but have no way to boil, filter or chemically treat it, it is still better to drink than die of dehydration. The effects of cryptosporidiosis can take two to 10 days, and the effects of giardia can take one to three weeks to rear their ugly heads. By that time, you will hopefully be out of your survival situation and can seek proper medical attention.

**Kit items:** Metal container (to boil water), water purification tablets (chlorine dioxide is the preferred chemical, according to the Centers for Disease Control), water containers, water filter straw, etc.

◀ **FOOD:** You can live three weeks without food, although I have heard of people lasting longer. You will be weak and a bit miserable, but you will not die without food. This is a very low priority. Having food with you or the ability to hunt, fish or gather food will make a wilderness survival situation much easier to contend with.

**Kit items:** Snare wire, fishing line, along with hooks and sinkers, a knife to carve dead-fall traps and the knowledge to process the animals you take. Carrying extra nutrition bars or something such as chia seeds or trail mix in your backpack will also help. Bullion cubes are small and can help curb your appetite. The ability to identify edible plants is helpful but, again, food is a very low priority.

## **ADDITIONAL SURVIVAL PRIORITIES**

Lets look at three additional survival priorities I believe should be considered along with the “Rule of Threes.”



◀ **Top:** The contents of the “Survival Tin” is limited only by your creativity (and the size of the tin).

◀ **Below:** A variation of Mors Kochanski’s “Pot Kit.” The author puts the metal pot and all its contents into a dry bag, which can hold all the kit contents when the pot is in use. The shoulder strap allows carry of the kit, alone, if you have to separate it from your backpack.





is a vital component of your wilderness survival situation. It will help you make the right decisions and is a large component of hope, because lack of sleep will greatly diminish your positive mental attitude.

**Kit items:** Your shelter items should help facilitate the sleep priority. Sleep is much more easily achieved if you are warm, dry and comfortable. Consider the following: a tarp, survival blanket, poncho, tube tent or other types of shelter items. Your daypack can be used as a pillow. Remember to fill up your plastic trash bag with leaves or grass to use as a sleeping pad that will provide additional comfort; but most importantly, you need an insulation layer between you and the ground to protect against conductive heat loss.

### MISCELLANEOUS ITEMS

Miscellaneous items to carry in your kit might include: a small repair/sewing kit, pencil, paper, reading glasses (a lifesaver, if you need them), bandanna and a small headlamp or flashlight.

How to carry your kit is another topic. Carry methods range from mini-kits that fit into a mint tin to larger kits that fit into a metal pot—and everywhere in between.

For the most part, your backpack is your survival kit. Although you could technically be separated from your backpack, that scenario is unlikely. You could always carry the larger items in your backpack and keep essential items in a smaller container that can be on, or attached to, your body.

### KIT EXAMPLES

**NECK KNIFE KIT:** I learned about the neck knife kit six years ago from a video by David McIntyre. While first aid is not addressed in this kit, you can make a fire, signal, navigate, purify water, find your way in the dark and do a little sewing.

**FANNY PACK KIT:** This concept is a great idea if you need to drop a heavy pack and go minimalist. All your basic survival kit items are in this pack, along with a water bottle sling to carry your *metal* (used to boil water) bottle.

**POT SURVIVAL KIT:** Wilderness survival expert Mors Kochanski suggests putting all your survival gear into a metal pot. Mors is a human encyclopedia of survival knowledge, and his ideas are always something to pay close attention to. I just added a dry bag to his idea so I would have a place to put all the gear that was inside the pot while I was using it. When I am done using it, I put the pot and all its contents into the dry bag.

Putting your own spin on both your survival

## “MAINTAINING YOUR BODY CORE TEMPERATURE IS EASIER THAN RAISING OR LOWERING IT.”

kit contents and the best way to carry your kit is what makes it *your* kit. Be sure you know how to use, and have tested, the items in your kit before you venture into the wild.

Keep up with expiration dates on any medications and water purification tablets you are carrying. Test out your kit. Try to live out of your kit for 24 to 48 hours, keeping notes on what works and what doesn't work. Of course, do this at a campsite or in your backyard so if your kit fails you, there is a safe place to retreat to. **ASG**

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# REACHING OUT

**AN EMERGENCY BEACON  
CAN SAVE YOUR LIFE ON  
THE WATER**

BY LARRY SCHWARTZ









**W**hen you are on the water, whether in a powerboat, sailboat, canoe or kayak, one of the

most important things you need in the event of an emergency is some way to reach out for help. That is the reason every well-equipped vessel is equipped with an emergency beacon and every prudent sailor has one on their person or gear.

Every month, several people are rescued because they had an emergency beacon that signaled their location and need for assistance. Your vessel might strike an unseen object under the water; you have mechanical failure; or your boat capsizes; and you find yourself in a man-overboard situation.

It isn't just civilian boaters who run into problems. The same thing can happen to commercial seamen and even the people who are coming to rescue others. In February 2016, a United States Coast Guard crew responded to a search-and-rescue alarm of a ship that was taking on water off the coast of New York City. After trying to get out to the boat in very rough seas, the ship was turning around to get other resources involved, and it was knocked

› When you do your part and register your EPIRB or PLB, the SAR or Coast Guard will do its part.

over by a massive wave, casting the whole crew overboard.

The crew leader got everyone together to help them stay warm in the water and then activated their personal locator beacons. They were rescued shortly after by a crew from the New York City Police Department.

So, even the pros need help sometimes, and having the right equipment helps them get it.

### THREE KEY FEATURES

Emergency beacons provide three critical functions. First, they send a radio SOS message to satellite networks, which are monitored by search-and-rescue (SAR) units around the world. Second, most of them can also transmit your GPS location along with the SOS message. And, third, before you take your beacon out on the water, you are required to register it and include information about yourself, where you are going and when you will be back.

After you have completed your initial registration, you can log back into the system each time you go out to make any updates you need. This information can be invaluable to SAR team members as they organize to come to your aid.

Registration information includes the identification number for the beacon, whose it is, which vessel it is associated with (for EPIRBs), the name and contact information for your emergency contacts, and optional information. This could include the names of the people on the vessel, special medical or equipment needs of the crew or passengers and where you are going.

### SEARCH AND RESCUE, AN INTERNATIONAL RESPONSE ORGANIZATION

The Search and Rescue Satellite (SARSAT) network was developed in the 1970s via a joint effort by the United States, Canada and France. Its purpose was to provide a means to track emergency beacon signals transmitted initially on 121.5 MHz frequency and then later, on the current 406 MHz frequency.

In the 1970s, the Soviet Union developed a similar system called COSPAS. In 1979, the





***“IT ISN’T JUST CIVILIAN BOATERS WHO RUN INTO PROBLEMS. THE SAME THING CAN HAPPEN TO COMMERCIAL SEAMEN AND EVEN THE PEOPLE WHO ARE COMING TO RESCUE OTHERS.”***



GETTY IMAGES.COM BY ANDREW PEACOCK

four countries banded together to form a satellite network—COSPAS-SARSAT—that could cover the whole globe. By 1984, the final satellites and computer systems were in place, and the system was fully operational.

### HOW BEACONS AND SATELLITES SAVE LIVES

Beacons are the first link in the COSPAS-SARSAT system that provides a way for search-and-rescue teams to quickly find and rescue travelers. As shown in the illustration (on page 32), the emergency beacon (1) sends an emergency message by radio to (2) satellites that are part of COSPAS-SARSAT search-and-rescue network. They then relay the message with your location to (3) a ground terminal station, which then routes it to (4) the mission control center. The mission control center then alerts (5) the nearest rescue coordination center, which dispatches search-and-rescue resources to come and get you.

There are three kinds of emergency beacons used on the water today: EPIRBs, PLBs and PABs.

### EPIRBs

EPIRBs (emergency position indicator radio beacons) are emergency beacons that operate on the 406 MHz frequency that is reserved for emergency beacons. Each one is registered to a specific vessel so that its signal immediately tells SAR

› You should inspect your emergency beacons, both EPIRBs and PLBs, on a regular basis to ensure they are working properly. Most versions have test features that allow you to send a test message to the satellite and get a return message indicating that it worked properly.



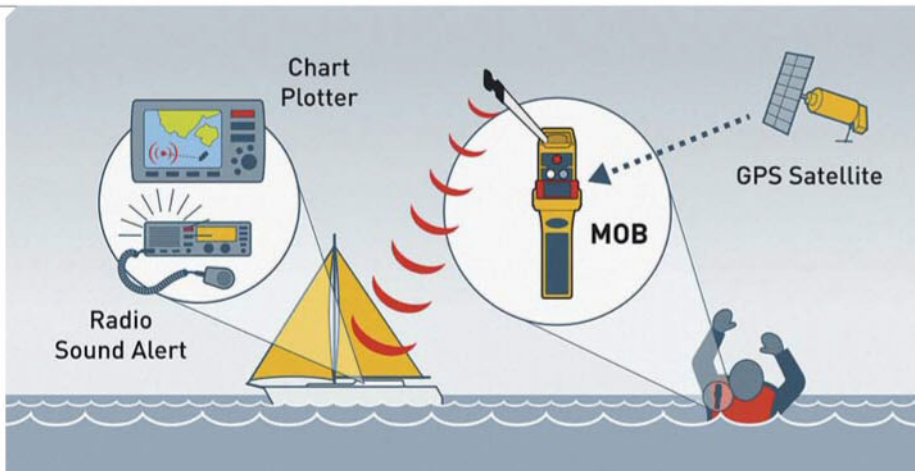
GETTY IMAGES.COM BY SEAN COOK PHOTOGRAPHY

› Personal locator beacons should be kept on your body at all times while afloat or stored, like this one, in your personal flotation device with other survival gear.

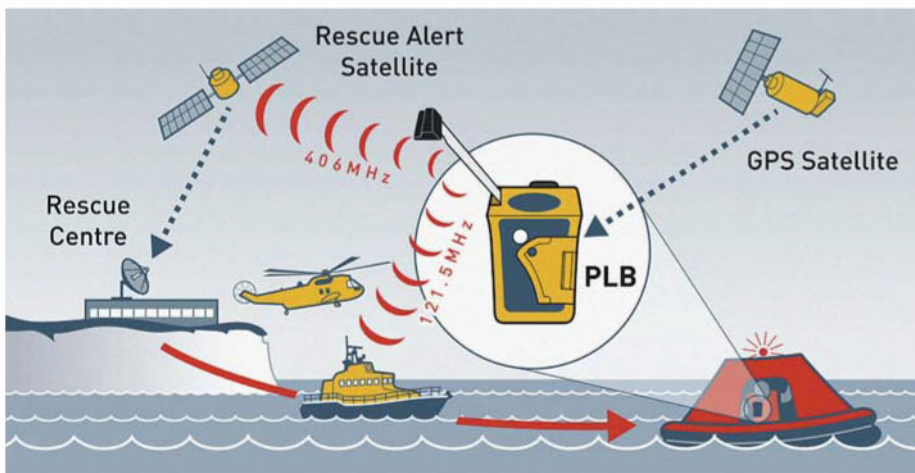


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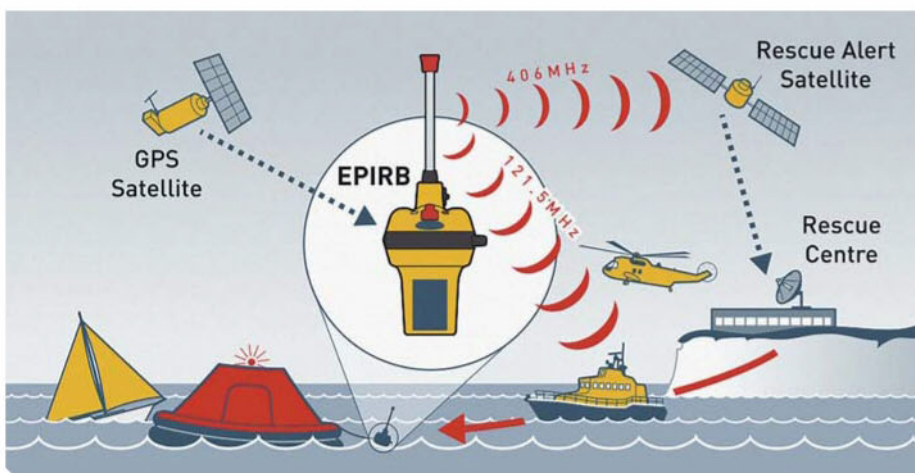




PABs (personal AIS beacons) use the AIS (Automatic Identification System) network for their communication purposes. Instead of relaying a message to a satellite that transmits the message to the nearest SAR team, the AIS gets your GPS location and then broadcasts the message to anyone who has an AIS receiver within a 4-mile radius. The receiver provides the people on board with the beacon's location so that ships nearby can then plot a course to the man overboard. (Image: [www.OceanSignal.com](http://www.OceanSignal.com))



PLBs (personal locator beacons) send out two signals—a 121.5 MHz signal that provides general location information and a 406 MHz signal that gives much more-specific location details. This signal goes to COSPAS-SARSAT satellites, which forward it to SAR coordinators on the ground. They, in turn, then dispatch the nearest SAR resource to come and get you. (Image: [www.OceanSignal.com](http://www.OceanSignal.com))



EPIRBs (emergency position indicator radio beacons) are registered to a specific vessel, rather than to a person. Like PLBs, they send out two signals—a 121.5 MHz signal that provides general location information and a 406 MHz signal that gives much more-specific location details. This signal goes to COSPAS-SARSAT satellites, which then forward it to SAR coordinators on the ground. They then dispatch the nearest SAR resource to come and get you. (Image: [www.OceanSignal.com](http://www.OceanSignal.com))

resources which vessel is in distress. An EPIRB is normally mounted on a bracket on the vessel and is activated either by hand or when it gets wet so that it can start transmitting whether someone is able to activate it or not.

Once it is activated, it continues to send the emergency beacon and GPS location information for at least 48 hours or until it is turned off. It also has an additional beacon that operates on the 121.5 MHz frequency, which helps search teams find your general location. After that, the 406 MHz beacon provides your location within several meters.

## PLBS

A PLB (personal locator beacon) is the personal equivalent of EPIRBs. You also register it, exactly as you do an EPIRB, but the information is about the person who is carrying it rather than the vessel it is mounted on. Because it is designed for use by an individual, it can be used anywhere the person goes—on the water, in the mountains or in an airplane.

PLBs have been responsible for getting SAR teams to people who have fallen off cliffs in the mountains; kayakers who have been swamped and capsized in the frigid waters off the Alaskan coast; and people who have survived a crash landing in the wilds.

Just like EPIRBs, PLBs send an SOS signal, and GPS coordinates to the COSPAS-SARSAT network, which then passes it on to the SAR team. The main differences are in their size and in battery life. Much smaller than an EPIRB, an PLB will fit in your pocket (which is where you want it to be, because it is what you will use to signal for help if your boat goes down or if you are away from the boat when you run into trouble).

PLBs also have the 121.5 MHz frequency beacon, like their EPIRB cousins. The battery is smaller but is designed to last at least 24 hours, rather than the 48 hours on an EPIRB. PLBs are also activated manually, rather than by getting wet. They are not required to float or have beacon lights, but many do, so add those features to your shopping criteria when you are looking for one.

## PABS

A PAB (personal AIS beacon) is a relatively new piece of technology. It is intended for use in a man-overboard (MOB) situation. It works like a PLB but contacts a different communications network and



has a much shorter range.

Receiving FCC approval in 2012, PABs send out a structured alert message when activated. This message is picked up by the Automatic Identification System (AIS), which can be picked up by ships, aircraft and facilities on land equipped with AIS receivers and are within a 4-mile radius. Using the information in the structured alert message, the receiving station can determine where you are via GPS coordinates.

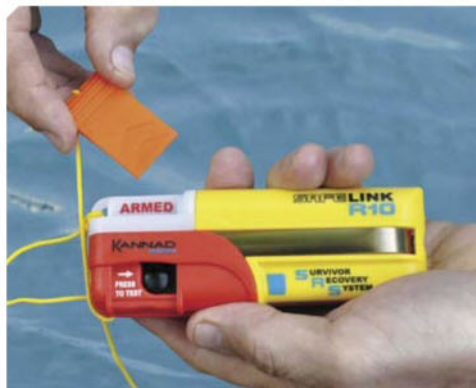
Your rescue might be by the Coast Guard, but it will just as likely be from a civilian or commercial vessel that was in the area and received the alert your PAB sent out. Unlike EPIRBs and PLBs, you do not need to register your PAB.

### THE RIGHT TIME TO USE YOUR BEACON

With all the features offered by the different types and models of beacons, there is one thing that is extremely important for you to understand and remember: Every time you activate your beacon, you are potentially putting the lives of SAR team members in jeopardy, and you are spending several thousand dollars for equipment, fuel and salaries. Aircraft and patrol boats are dispatched, radio communication centers are brought into play, and every hour the search goes on, the cost increases. Even if you don't care about putting volunteers in danger or wasting resources that might be needed to rescue someone in real danger, you face a danger yourself—a financial danger. Some jurisdictions are able to charge the cost back to the victim if they decide your call for help was not an actual emergency.

So, if you hit that little, red button on your PLB because you have been paddling your kayak off the California coast for several hours and you are exhausted, you might find yourself writing a check for tens of thousands of dollars for the Coast Guard patrol boat and helicopter that were dispatched to find you.

It is better to stop, eat something and gather your strength before you head into land under your own steam. On the other hand, if you are in that same kayak and can't see land because it's getting dark and you don't have a compass to guide you back to terra firma, hitting that SOS button might be justified.



## KEY FEATURES TO LOOK FOR

Although you would think the features below would be standard for all beacons, some have them, and some do not. Make sure the one you buy is a current version and that it has the following features:

- ◀ It transmits your GPS location along with the SOS message.
- ◀ Has a strobe or continuous-on light to help rescuers find you in the water.
- ◀ It is waterproof so it won't drop to the bottom of the ocean if you drop it.
- ◀ A lanyard connecting you to your beacon is also a good idea so you don't have to worry about storing it in the event you need to use both hands.



◀ This personal AIS beacon from Kannad Marine fits in your shirt pocket and sends a distress signal out to any AIS-equipped vessel within a 4-mile radius. Unlike EPIRBs and PLBs, it does not communicate via one of the search-and-rescue networks; it depends on nearby ships equipped with AIS receivers to come to your aid. (Image: Kannad Marine)

◀ PLBs come in many sizes and shapes and include a variety of features, such as this LED display, but they are all pocket sized, and most can be operated with just one hand. (Image: www.ACRartex.com)

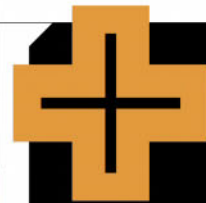
◀ PABs, such as this rescueME MOB beacon from Ocean Signal, are normally stored on a life vest so they will be easy to access and always be present if you go man overboard. (Image: www.OceanSignal.com)



The criterion you need to use is whether this is a life-and-death situation. If there is any way you can get yourself out of the bad situation you find yourself in, it is not time to activate your beacon. **ASG**



**“THE CRITERION YOU NEED TO USE IS WHETHER THIS IS A LIFE-AND-DEATH SITUATION.”**



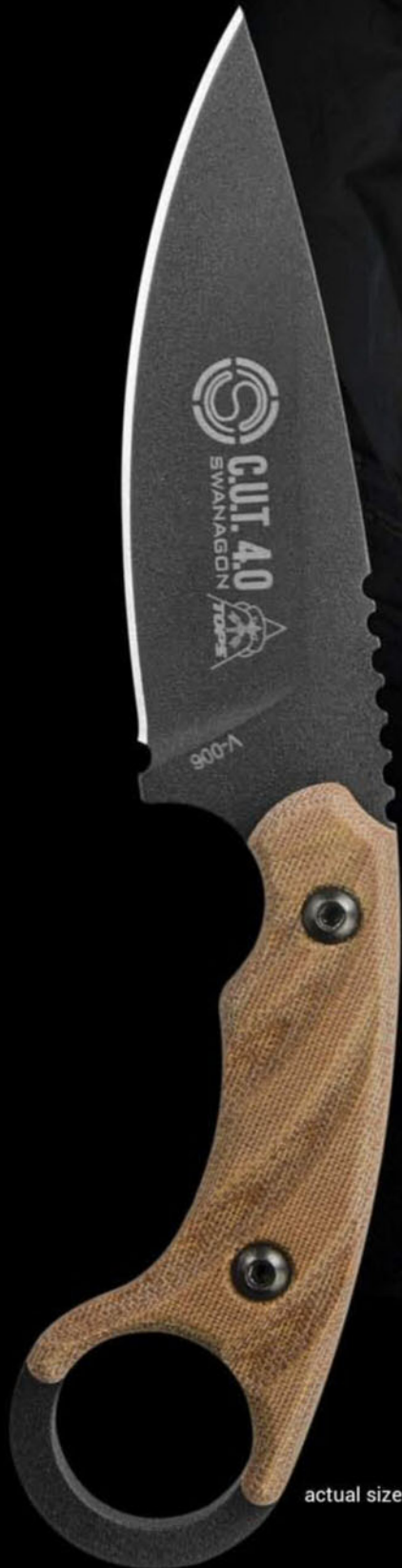
## MAJOR BRANDS

- 1 ACR**  
[WWW.ACRARTEX.COM](http://WWW.ACRARTEX.COM)
- 2 DATREX**  
[WWW.DATREX.COM](http://WWW.DATREX.COM)
- 3 JOTRON**  
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- 4 KANNAD MARINE**  
[WWW.KANNADMARINE.COM](http://WWW.KANNADMARINE.COM)
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# GEARED FOR ALASKA

WHEN A TRIP RELIES ON SMART  
DECISIONS, THERE ISN'T LITERAL  
OR FIGURATIVE ROOM FOR FLUFF

STORY AND PHOTOS BY KEVIN ESTELA

**B**y the time this issue of *American Survival Guide* prints, I'll be deep in the Alaskan backcountry on a float trip with Mark Knapp of Mark Knapp Custom Knives for most of July and August. We will be floating the Sagavanirktok River deep within the Arctic Circle while hunting caribou, wolf, sheep and ptarmigan. I have been meticulously planning this trip for months.

Bound by a strict gear weight limit, every item carried has purpose; many, multipurpose.

This article is part one of a two-part series. Part one features the gear I will be using, and part two will focus on the gear lessons I learned. If you decide to retrace my tracks or make new tracks of your own, you won't have to reinvent the wheel as you decide what to carry. The gear I chose is important. Even more important are the reasons I decided on these items.

## DECISIONS, DECISIONS

"Your gear limit is 150 pounds."

With these words, my friend, Alaskan knife maker Mark Knapp, established the confines of what I could carry.

What's at stake if that limitation isn't met? The DeHavilland Beaver pilot could refuse service or force me to nix a vital item at the last minute, delaying the flight into the bush.

To the avid backpacker, this 150-pound number seems like a free pass to carry an excess of gear. Even to the canoe camper, 150 pounds is a lot to portage/carry. Mark would provide the



# KNOW BEFORE YOU GO: THE PLANNER'S MINDSET



Part of any effective readiness plan is awareness. Alaskan readiness involves reaching out to local experts, studying the maps of the area of operations, understanding what the weight of a fully loaded pack will feel like and the effects it will have on the body.

Awareness includes understanding the temperature extremes and swings encountered during a given day, as well as historical highs and lows. It also includes knowing what animals can be found where you are traveling beyond those you wish to hunt and fish for.

One of the worst feelings experienced on a trip is regret. Traveling days to reach a destination deep in the Alaskan bush, no one wants to think or say out loud, "I wish I had ..." in the moment.

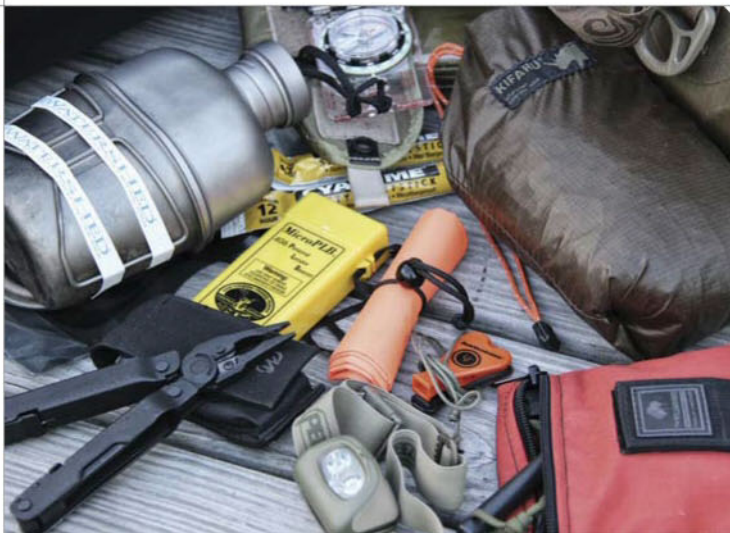
Fortunately for the outdoorsman, there are many seasoned Alaskan guides willing to share their love of the backcountry and their understanding of how to coexist in it with those seeking out the information.

As with medical advice, it is important to seek out second and third opinions and find out where the commonalities intersect. Books can be purchased, online forums browsed and opinions collected. This should provide a good starting point for gathering intel on what to pack.

Some advice I was given that put this trip into perspective: An acquaintance who was a former Kodiak Island military survival instructor told me to be prepared in case my guide goes down. While we want to plan for success, we must be prepared for failure.

One cannot rely on the guide being there to address all problems if the guide's absence or injury is the problem. Mark is a reliable and competent outdoorsman who gives me no reason to be concerned, but accidents happen; and, just in case, I am prepared to pull my own weight ... and his, if need be.

Traveling to Alaska, or any place for that matter, requires being ready for Mother Nature to throw her worst at you. As long as you know before you go, you can always fall back on your preparedness if your trip takes a turn for the worse.



raft, tent and camp kitchen gear, and I would pack for just me. To me, these 150 pounds became a sentence—almost a curse.

It is one thing to carry gear for one type of outing. Any reader of this magazine could likely put together a fishing kit, for example, and be well within the limitations set by this number. The difficulty comes when clothing, equipment and provisions for multiple pursuits must fit within this strict limitation. It's simply a task, done many times in the past, to pack for one trip, but it becomes an endeavor, an obsession, to pack for a multi-week trip comprising hunting, fishing, camping, rafting and photography. One hundred fifty pounds might seem like a lot of leeway, but it isn't when individual item weights add up quickly.

There have been countless articles that incorporate gear lists. This article is just as much about what to carry as it is why I chose to carry an item. Up in the wilds of Alaska, it could be days before help can arrive. There is no walking back to the car (or bush plane, in this case) to grab something you forgot.

What follows is a selection of gear I carried and the logical reasons for packing what I did. (A complete list of what I carried will be discussed in the follow-up article.)

## BLADES

When I met Mark Knapp at the BLADE show in 2015, he told me he had always wanted to take a writer/photographer into Alaska on a hunt to test out one of his 1911 Combat Survivor Bowie knives in the field. It took mere seconds for me to throw my hat in the ring.

For this reason, the camp knife I am bringing to Alaska is one of Mark's patented 1911 blades with a hollow-handle magazine survival kit in it. This knife is being carried for all camp knife duties, including processing wood, preparing game and the testing this trip was intended for.

Because Mark's knife is quite large, it will be carried in my pack. I'll have my Bark River



◀ The author is carrying a Mark Knapp Custom Knives 1911 Combat Survivor Bowie with him while in Alaska. This knife and its survival kit will be used around camp and in the field.

Knife and Tool Bushcrafter with me at all times, and a Leatherman and a collection of smaller-neck knives and game-processing blades will serve as support knives. These knives are smaller, proven in the field and will always be on me ... not far from reach.

## SHELTER

In general, the “rule of threes” helps dictate what I carry into the backcountry. Exposure, according to this rule, means a person can live approximately three hours exposed to the elements without proper shelter. Shelter starts with clothing and extends to the temporary home we make out of tarps and tents. Around water, my shelter needs to include waders for getting in and out of the raft, as well as hunting and fishing along the riverbank.

My shelter starts with my clothing. Simms Waders and a Kryptek Koldo Jacket work to keep me dry. Because I will be wearing the waders while rafting and hunting, I will not need to bring rain pants. The insulating and base layers worn underneath were all chosen for water-resistance or the insulation value when wet.

In general, if separated from my gear, I want the ability to spend the night only in my clothes. Layering is key, and lightweight layers are my priority for clothing.

Mark told me I didn’t need to worry about the tent, but I did want an emergency personal shelter for any unexpected bivouacs. The Kifaru Sheep tarp weighs very little and takes up about as much space as a soda can. It was the perfect choice for my bailout kit. While in the shelter Mark provided, I am sleeping in a Kifaru 0-degree, center-zip slick bag atop a standard RidgeRest closed-cell sleeping pad.

## SIGNALING

It was an obvious decision to carry an emergency personal locator beacon (EPLB).



➤ Watershed Bags were chosen for the float trip because of their water-resistance and durability. These bags feature a proprietary closure that far surpasses the seal found on commonly available dry bags.

**“THE ONLY WAY OF KNOWING WHAT SHOULD BE CARRIED IS BY DOING YOUR RESEARCH, USING IT AND REFLECTING ON ITS PERFORMANCE IN THE FIELD.”**

Cell phone service is not a guarantee, and beyond the Storm whistle, emergency signal mirror and rescue strobe, this device will ensure a distress symbol would be sent. A former survival student and good friend recommended one that uses a frequency picked up by commercial airlines. For \$425 and a free registration with SARSAT (Search and Rescue Satellite Aided Tracking), I purchased the MicroPLB from Wireless Concepts.

This EPLB is slightly larger than a cell phone and operates in extreme temperatures. Should I be separated from my guide, or if my guide goes down and I’m unable to move him, this device will provide added insurance. For even more insurance, I have two whistles of different pitches, as well as signal mirrors of various sizes and a signal panel.

In doing research for this trip, I was told that fires, even the signal variety, are often disregarded, because many smoke plumes are spotted in the backcountry. Signaling is not something you do half-baked—especially not in Alaska.

## FOOD AND WATER

Alaska certainly has picturesque bodies of water, but the water should not be trusted as safe to drink untreated. I will use a simple water bottle filter while I am on the river, and a Heavy Cover Titanium Canteen set carried in a Centerline Systems Mother Canteen Carrier

➤ The Heavy Cover Titanium Canteen is the author’s water bottle-of-choice. It is carried in a Centerline Systems Mother Canteen Carrier pouch.



➤ In case of an emergency, a personal locator beacon is carried. This MicroPLB is supremely reliable in a wide range of weather conditions and temperatures.



will be my primary hydration kit. Supplementing this will be collapsible Platypus and Hideaway flask bladders. I do not want to burden myself with extra weight or space of carrying additional metal canteens when the bladders will work just fine. I will fill these with treated water each day before we strike out from the spike camp.

Mountain House foods supplied Mark and me with freeze-dried provisions for our stay in the backcountry. We planned to supplement these with fresh fish, ptarmigan and caribou meat taken from the land. This combination of lightweight backpacking food, along with what can be acquired fresh in the backcountry, will help keep packing weights well below the 150 pounds allotted.

## ILLUMINATION

Summers in the Arctic Circle offer very little nighttime. When the sun sets around 11:00 at night and rises around 3:00 in the morning, there really isn't much darkness. The sun lingers on the horizon, and it's possible to see what is around you in the twilight.

For this reason, aside from general convenience, I carry a small Streamlight Protac AAA single-cell-battery flashlight, as well as an AAA Petzl Tactikka headlamp for hands-free convenience. LED technology has improved greatly over the years, and even a small light such as this one will cast a spotlight a considerable distance. This headlamp uses the same AAA batteries, thereby minimizing the need to carry multiple types of spares.

## FIRST AID AND HYGIENE

An often-overlooked area of survival comprises first aid and hygiene. For this trip, I'm carrying an individualized first aid kit (IFAK) with an accessory "boo-boo" kit. This will cover the vast majority of accidental cuts, scrapes and burns. Meds are kept simple: pain, anti-diarrhea, anti-histamine and Tylenol.

Because this is a float trip, staying clean isn't an issue; there will obviously be an abundance of water that can be heated up for a "bird bath." I am packing a simple section of pack towel to dry off. Nail clippers, foot powder and basic toothcare products will also be included, in addition to biodegradable Dr. Bronner's Soap. Toilet paper and wet wipes, along with a small polymer Fiskars spade, will also be included.

## HUNTING AND FISHING

Firearms selection is very personal, and caliber debates are an ever-present



## "IN GENERAL, THE 'RULE OF THREES' HELPS DICTATE WHAT I CARRY INTO THE BACKCOUNTRY."

part of the gun world. For this trip, I took the advice of others in choosing my rifle, handgun and small-game-getter. The Remington 700 Alaskan Wilderness Rifle chambered in .300 Winchester Magnum will be my hunting rifle for caribou; the Tactical Solutions X-Ring rifle chambered in .22 Long Rifle will be used on ptarmigan; and the SIG Sauer P220 10mm will be carried around town and in a chest rig ... just in case.

Considering that Alaska's waters are home to fish that range in size from fingerlings to king salmon and larger, narrowing down practical fishing rod/reel combinations wasn't easy. The

➤ *Right:* A Maven Optics B.2 11x45 binocular was chosen for the caribou and sheep hunt. This binocular is finished in Kryptek Highlander pattern camouflage.



➤ *Below, left:* Accidents happen, so a first aid kit is an important item for the Alaskan load-out. Essential first aid and health items carried include a tourniquet, compressed gauze, blister kit and emergency meds.



◀ *Near left:* Because there is little darkness in Alaska at this time of the year, flashlight and headlamp selections were grounded in practicality. A single-cell AAA Streamlight and Petzl TacTikka provide enough light for general way-finding during twilight hours.



◀ The author's rifle is a Remington 700 Alaskan Wilderness Rifle chambered in .300 Winchester Magnum and topped with a Schmidt Bender 3-12x50mm Zenith scope.

decision came down to what was most likely to help supplement our Mountain House freeze-dried meals, rather than what would have the greatest “wow” factor when uploaded to social media and shown around the office.

For these reasons, I opted for two rod-and-reel combinations: An ultralight combo (St. Croix 7-foot Ultralight Premier Spinning) will be used for smaller fish—such as grayling that, according to Mark, would average 2 pounds—and the other will be a medium action rod (St. Croix 9-foot Medium Light Wild River) for the larger fish (trout, char and salmon—all around 5 pounds average) found in bigger bodies of water.

## DRY BAGS

After speaking to Butch Whiting from Kryptek and reading *Float Dragging Alaska*, by Larry Bartlett, it became pretty clear the only dry bags I want to trust my equipment to are those from Watershed Bags. These bags have a special seal, unlike the common, “big-box store” variety sold to hobbyist canoers and kayakers. These bags have numerous tie-down points and are extremely durable.

I will have one packed with my bailout gear (see the sidebar on this page), one with camping gear/clothes and the other with equipment for hunting and fishing. A special Watershed Bag, the Torpedo Gun Case, was chosen to transport my Remington 700 rifle while I am paddling down the river. These bags are packed, but there is room to spare. This “room” traps air to allow the bags to float, should they go into the drink.

## CAMERAS AND OPTICS

As a writer/photographer, I have to carry additional equipment just to document my experience for upcoming articles. After having a camera go down in Costa Rican humidity a couple years before, having a backup to my primary camera is critical. This backup is sealed in a Foodsaver bag with desiccant packets. As a last resort, my cell phone is also packed as a third camera option.

While hunting and within reach during the nonhunting days, I will carry a Maven Optics binocular. This 11x45 B.2 bino has the power and light transmission capability to provide the user with a clear view at great distances. For part of the trip, I will assist Mark on his sheep hunt, and this binocular is my choice for that role.

## LESSONS LEARNED

A follow-up to this article will appear in the coming months to present the equipment that worked, the equipment I wished I had brought and the equipment that could have been omitted or replaced. (If I had included the decision-making process for all the other gear I carried—boots, gloves, lures, cordage, cleaning kits, etc.—this article wouldn't fit into the pages of this magazine.)

Gear selection is always mission specific, and the process of determining the pros/cons is ongoing. The only way of knowing what should be carried is by doing your research, using it and reflecting on its performance in the field. **ASG**

# BAILOUT KIT

In *Float Dragging Alaska*, Larry Bartlett advocates carrying a small, personal-sized survival kit that never leaves your side. Should you be separated from your larger kit, this bailout bag will have what is necessary to successfully spend an emergency bivouac afield. It should provide for basic shelter, fire, signaling and water and have room to spare for other personal effects with psychological and physical survival value. After planning the clothes I would wear, this kit was designed first. Keep the kit light enough so it will always be on you. The total weight of the kit below is 5 pounds, 12 ounces.

## FIRE

- ◀ Solkoa FastStrike ferrocerium rod
- ◀ Ziptop bag with petroleum cotton balls
- ◀ Exo-Tac fire sleeve (Bic lighter)
- ◀ ECCO wind/rain storm matches

## SHELTER

- ◀ Kifaru Sheep Tarp
- ◀ Six (6) MSR Groundhog Stakes
- ◀ 50-foot Type IA cordage
- ◀ Solkoa MIL-SPEC heavy-duty emergency blanket
- ◀ PFD (while not included in the pack, it is worn most of the time and can be used as an insulative seat on the ground)

## SIGNALING

- ◀ Wireless Concepts MicroPLB
- ◀ UST Jetscream whistle
- ◀ 2x3-inch signal mirror
- ◀ Best Glide 36x20-inch blaze orange signal panel

## WATER

- ◀ Heavy Cover canteen, cup and lid
- ◀ Aquamira Frontier emergency drinking straw
- ◀ Hideaway flask collapsible water bladder

## MISCELLANEOUS

- ◀ Leatherman Supertool 300
- ◀ Petzl TacTikka headlamp
- ◀ Bandanna
- ◀ Cell phone (for camera feature)
- ◀ Vacuum-sealed energy bars
- ◀ Suunto MC2G compass
- ◀ C.A.T. Tourniquet
- ◀ Wallet







# MASTERING **THE HAND DRILL**

TECHNIQUES TO ACHIEVE “SPEED COALS”

BY ALAN HALCON







**A** survival situation, by definition, means a threat to life. It means one is facing an emergency situation and that failure to mitigate this situation quickly can lead to loss of life. So, imagine—to my bewilderment—how I felt when asked to write an article on the hand drill for *American Survival Guide*.

I first thought, *That is about as anti-survival as one can get!* Why? Because it can be very difficult to start a fire with the hand drill on a good day and nearly impossible on a bad one. I've seen many a skilled man (myself included) fail terribly with the hand drill when the pressure was on. Most people who try the hand drill can go a lifetime without ever actually making a fire with it.

In other words, to regard this as a viable survival skill is irresponsible, in my opinion. It is better left as a skill for the purpose of demonstration of a time gone by to demonstrate what native people did when there was nothing else available, rather than as a way to save your life. At best, in a survival situation, it's viable scope is possibly limited to prisoners of war or people with no gear truly lost in the wilderness. Beyond that, any prudent person would properly prepare with numerous ways to make a fire before heading to the outdoors.

According to the great Mors Kochanski, speaking about the less-difficult bow and drill:

"A person who knows how to light a fire with a bow drill won't allow himself to be caught in the bush without matches. And if you're the type of person who causes yourself to be caught in the bush without matches, you're likely too stupid to know how to light fire with the bow drill."

Wow! Harsh ... but true.

Why, then, are the hand drill, the bow and drill and other friction fire methods included in so many survival manuals if they are not viable survival methods? Frankly, I'm not exactly sure.

I got interested in making a coal this way, because I wasn't sure it could actually be done. I became obsessed with perfecting the art. It was a personal challenge. (I'm often credited with holding the world record for achieving a coal with the hand drill—two seconds. And although that might be true, I more routinely fall within the three- to five-second range, depending on the materials.)

*[Editor's note: I was one of the seven*



STYLING: JESSICA WILSON / BY JAMES BRAUN

***"... IT CAN BE VERY DIFFICULT TO START A FIRE WITH THE HAND DRILL ON A GOOD DAY AND NEARLY IMPOSSIBLE ON A BAD ONE."***

*witnesses who twice observed Halcon getting a coal from the hand drill in two seconds. There was one naysayer who claimed it actually took Halcon 2.7 seconds, but that's another story.]*

Here, then, are the techniques I've used to help achieve what I call "speed coals."







◀ The seated/  
crossed-leg  
position



◀ The "bow and  
drill" position

◀ **The Bow-Drill Position:** In what I call the bow-drill position, you raise up off your rump and shift your weight forward and nearer over the top of the drill. However, in this position, your arms are still extended. As a result, the ability to apply downward pressure is still reliant only on your arms.

◀ **The Short Stance Position:** By closing your stance and keeping your elbows bent (instead of outstretching your arms), you can shift more of your weight over the drill, effectively allowing you to apply more downward pressure.

## THE TEST AND RESULTS

Several years ago, I conducted an experiment to see how body positions affected my ability to apply downward pressure.

With the aid of a standard bathroom scale and my favorite hand drill of the time, I took up the different positions. While applying as much downward pressure as I could, I recorded my results.

◀ **Prayer position: 20 pounds**

◀ **Crossed-leg position: 19 pounds**

◀ **Bow-drill position: 23 pounds**

◀ **Short stance position: 31 pounds**

◀ Below: The  
kneeling or prayer  
position  
and the short-  
stance position

## DOWNWARD PRESSURE

After coaching thousands of students through the use of the hand drill, I've found that the single biggest problem they have has to do with downward pressure—or rather, the lack thereof.

Assuming the wood is properly cured (thoroughly dry and free of moisture), and the wood densities and sizes are optimum, the single biggest reason for failure, in my experience, is lack of downward pressure. Even while I am personally present to help coach a student, the ability to apply downward pressure is the biggest hurdle everyone seems to have.

Yes, speed is important, but downward pressure is of greater importance, and I often demonstrate this by decreasing my speed of spinning and increasing my downward pressure. Almost instantly, I still develop smoke. However, if I decrease the pressure and increase the speed, I rarely get smoke.

## FIX THE PROBLEM

No two people are built the same; and really, the size of the person doesn't really matter. I've had fairly muscular men fail at getting the hand drill coal, while much leaner, older women successfully achieve a coal. What mattered was their ability to apply the pressure where it was needed.

Here are some common positions for doing the hand drill and how they affect your ability to apply downward pressure:

◀ **The Prayer or Kneeling Position:** As with the seated position, your body weight is centered over the ground, under your rump. And, as with the seated position, you rely solely on your arms to apply sufficient downward pressure.

◀ **The Seated and Crossed-Leg Position:** The seated position comes in a couple of variations, either crossed leg or one leg slightly extended to hold down the hearth. In either case, your body weight is centered over your rump, which is in contact with the ground. In this position, you are completely dependent on your arms to apply sufficient downward pressure to achieve a coal. For some, this is viable, but for most, this can be very difficult.





# A HUMBLING EXPERIENCE

I was asked to do a segment on survival for a television show. Everything was going great. We made shelter, found water and scrounged up some wild food.

The producer wanted to do a segment on fire-making using different techniques. I demonstrated how to use a broken headlight as a parabolic reflector to make a fire. I also demonstrated the magnesium fire-starting tool, as well as a few other things. Everything was going flawlessly. The last thing I wanted to demonstrate was the hand drill.

I picked up my mulefat drill and my alder base and started going at it. Smoke just started pouring out, and I knew I was going to get a coal for sure. After a few turns with the drill, I stopped ... but no coal was produced.

*What the heck?* ran through my head. I thought for sure I had it. I started again. And again, I got tons of smoke, but still no coal. By this time, beads of sweat were pouring down my face. The camera was rolling, people were watching, but no coal.

After a few more tries, I looked up at the producer. I then pulled out my ferro rod and sent a shower of sparks onto the little dust pile I had made with the hand drill and immediately got a coal. Without



missing a beat, I took the coal, put it in some tinder and blew it into a flame.

When the show aired a couple of months later, I sat there, glued to the TV, wondering what was going to be shown. When the fire scene came up, I started getting nervous, hoping I didn't look like an idiot. Amazingly, through the magic of editing, I looked as if I knew what I was doing!

*[Editor's note: If you would like more information on the hand drill, download the author's booklet from [www.thehanddrill.com](http://www.thehanddrill.com).]*

**“A PERSON WHO KNOWS HOW TO LIGHT A FIRE WITH A BOW DRILL WON'T ALLOW HIMSELF TO BE CAUGHT IN THE BUSH WITHOUT MATCHES.”**

➤ The author examines shafts of mulefat, an ideal wood for the hand drill.



◀ Above: Using the fatty portion, or blades, of the hands

◀ The author looks for the straightest shafts of the mulefat plant for hand drills.





You can see that the short stance allows you to apply more downward pressure than all the others. This equates to the ability to produce a coal faster than by using the other positions. By doing this, you will also be less fatigued.

I tried the prayer position by also getting up on my knees instead of sitting on my calves. This small change in position shifted my weight forward, closer to the action. The result: The amount of pressure applied jumped from 20 to 30 pounds. This position is great but doesn't allow you to hold the base under your foot like the short stance position does.

### USE YOUR HANDS CORRECTLY

Another simple little tweak that helps improve your ability to apply downward pressure is to use the meaty portion of the palms—the section of the palm that is at the base of the pinky. By slightly opening your palms—not too much—and shifting the contact points to those sections of your palms, you can more easily dig into the drill and apply more downward pressure. **ASG**

◀ *Left:* Watch the dust that forms in the notch of the hearth to see if you've actually formed an ember. Here, we see the bottom of the drill and a well-used hearth.

◀ *Bottom:* Once you get your ember, you need to carefully feed it small tinder until you get flames.











***“SIG SAUER HAS TAKEN ITS PROVEN P220 PLATFORM AND REDESIGNED IT TO HANDLE THE 10MM CARTRIDGE.”***

**T**he 10mm is a round often looked past in favor of standard 9mm, .45 ACP and 40 S&W offerings. Originally developed when the FBI required more penetration performance in its sidearms, it had a brief stint as standard caliber for the FBI until it was later replaced in favor of a round considered to be more controllable by a wider range of field agents. The round developed a reputation—often from those who never fired it—as uncontrollable and painful. Still, the round never disappeared and has a loyal following to this day.

These 10mm pistol enthusiasts are some of the most loyal to that caliber than most other shooters of any alternative rounds. The round has filled a niche hunting market for years. Prolific hunters such as Ted Nugent swear by the caliber for sidearm hunting, and no shortage of “trophy” shots are found searching this caliber online.

When the right ammunition is used, the results are simply impressive.

Fast forward to 2016: SIG Sauer has taken its proven P220 platform and redesigned it to handle the 10mm cartridge. It is a single-action-only (SAO) pistol with an extended barrel and is finished in Kryptek

**IF YOU ARE STARING DOWN THE SIGHTS AT  
A TROPHY RECORD OR CHARGING ANIMAL,  
THIS PISTOL IS GOING TO DELIVER**

STORY AND PHOTOS BY KEVIN ESTELA

# **SIG SAUER P220 10mm HUNTER**





Highlander camouflage. The aluminum frame has been replaced with all steel.

SIG's very deliberate intention is to make the P220 10mm Hunter the premier handgun for hunting medium-sized game. When sub-25-yard shots and bushwhacking through thick brush are your norm, a dedicated hunting handgun may make more sense than hauling and shouldering a rifle or shotgun.

The P220 10mm Hunter is not just for pursuing game but also for warding it off. Capable of dropping medium- to large-sized dangerous game (wolves, black bear and cougar), this pistol will help you turn the tables on what might be hunting you.

To determine the capability of this pistol, I carried it while on numerous hikes and used it many days on the range. What follows are my experience and findings from practical testing in adverse conditions.

## INITIAL IMPRESSIONS

I had the opportunity to handle the P220 Hunter at the National Rifle Association Great Outdoors Show in Harrisburg, Pennsylvania, earlier this year. Perhaps it was the lack of coffee coursing through my veins early in the morning, or maybe it was my familiarity with the alloy-framed version of the P220, but I initially found the all-steel

P220 Hunter heavy in the hand.

There is no hiding the weight discrepancy between the two pistols. Then, again, the .45ACP round doesn't slap the slide against the frame of the pistol as much as the 10mm round does, and the steel is necessary on the harder-hitting 10mm.

I had the chance to speak with the men who designed it and found out just how SIG converted its .45 ACP model to the 10mm cartridge. According to SIG Sauer's Product Manager of Pistols Tim Butler, the pistol was beefed up to handle the 10mm chambering.

How much? During the course of this review, I weighed my standard SIG P220 aluminum frame with Hogue grips and the



➤ *Far right, top:* The author used the SIG P220 on a makeshift pistol rest on the 15-yard firing line. With practice, minute of “large-game vital target” angle was easily achieved. (Photo: Allain Atienza)



➤ The SIG P220 10mm performed well on the range. This five-shot group was performed at 15 yards on an improvised log rest in a crouched position. (Photo: Allain Atienza)



➤ *Far right, bottom:* Comparison photo of the author's full-sized P220 chambered in .45 ACP and the new SIG P220 10mm Hunter. Note the extended length of the slide.



P220 10mm Hunter Frame. The aluminum version weighed in at 12.4 ounces, while the steel version came in at 21.15 ounces. SIG Sauer pistols are known for their reliability, and a cracked frame wasn't something the company was going to invite by using the traditional aluminum found in the P220 Classic line of pistols.

Months later, when I received my P220 10mm sample, it came with standard SIG accoutrements, including a spare magazine, pistol lock, manual, sample lubricant and empty chamber indicator. This time, the weight seemed less noticeable.

After moving around with the pistol unloaded and carried in a holster, presenting it on various targets to achieve a sight picture in my yard and doing dry-fire drills with it, the weight differential between my “new” P220 and my original alloy version didn't bother me at all.

I found the pistol pointed quite naturally, and the sight picture was very clear. Even though I felt comfortable handling it at my leisure, I wanted to ensure I wouldn't fumble with the safety or trigger when out in the field. (I recommend that users of this handgun do the same and take the time to become familiar with the SAO action—especially if their previous muscle memory trained them to use the Classic line with the double-action/single-action trigger.

### KRYPTOK CAMO

The Kryptek camouflage pattern used on this handgun is the proprietary “Highlander” design. Originally designed for mixed terrain in Alaska, this pattern blended in nicely with the New England hardwood forest where I live. SIG Sauer has a number of products releasing in 2016 meant for the hunting market. This affiliation with a well-known hunting pattern is a clear indicator SIG wants to carve out a spot in the hunting community with this pistol.

The Kryptek finish was unaffected by gun-cleaning solvents, along with repeated holstering and unholstering from my Kifaru Koala-Lite chest pouch and Sticky Holsters LG-6 model. The only wear I found on the finish was just rear of the ejection port, where brass must have made contact with it during normal cycling of the slide. The unfinished components of the pistol, sights, trigger, grips and controls blend in nicely with the multi-directional and bi-level layering design for better concealment at close and long ranges.

## SIG Sauer P220 10mm Hunter

SPECIFICATIONS

- **CALIBER:** 10mm
- **CAPACITY:** 8+1
- **ACTION TYPE:** Single action only
- **BARREL LENGTH:** 5 inches
- **SIGHT RADIUS:** 5.7 inches
- **TRIGGER PULL:** 5 pounds
- **HEIGHT:** 5.5 inches
- **WIDTH:** 1.5 inches
- **OVERALL LENGTH:** 8.6 inches
- **WEIGHT:** 44.75 ounces
- **FEATURES:** Pyranha G10 Grips, adjustable rear sight, TRUGLO TFO front tritium/fiber-optic sight, adjustable rear
- **MSRP:** \$1,467





## SIGHTS

The TRUGLO TFO (tritium/fiber-optic) front sight is designed not to fail under any condition. The CNC-milled, all-steel front sight has a tritium insert behind the fiber-optic body that is meant to power it when there is no light to gather from the environment. The fiber-optic insert cannot be seen by the target. The dovetailed front sight is low profile and doesn't snag when drawing it from the holster. The rear sight is SIG's adjustable target style. For shooting out to 25 yards, the 10mm round will drop very little, and there might be little need to adjust the sight if it is point-of-aim/point-of-impact, as my sample is.

Worth noting is the Picatinny rail section found on the frame of this pistol. An



◀ The SIG Sauer P220 10mm has an adjustable rear sight, as well as a TRUGLO front site that illuminates with the aid of a tritium insert in low-light conditions.



**“THE P220 10MM HUNTER  
PERFORMED AS INTENDED AND  
DELIVERED THE ACCURACY NEEDED  
TO GET THE JOB DONE.”**



◀ The Crosstac Pro Maintenance Bench & Range Mat provides the perfect work surface while in the field.



◀ The Crosstac mat makes it easy to carry all the essentials in a small compartment that is attached to the mat body.



◀ One side of the Crosstac Pro Maintenance Bench & Range Mat is a multi-cam finish to blend in with the environment.



## **CROSSTAC PRO MAT**

Anyone who spends enough time afield with a firearm knows how important maintenance is. Rain, mud, dust and debris can accumulate in the working parts of a pistol, rifle or shotgun and potentially ruin a day in the woods.

Cleaning a firearm after a day at the range is equally important. Designed for competition shooters, hunters and those who carry firearms regularly, the Crosstac Pro Maintenance Bench & Range Mat is exactly what is needed to carry cleaning and maintenance gear into the field and provide a clean surface to work on.

Part of the appeal and practicality of this double-folding shooting mat is the ability to carry the essentials in a small compartment attached to the mat body. Elastic loops of various sizes are designed to hold small bottles of oil and or solvent, gun brushes, bore lights, cleaning rod components or small screwdrivers. A zippered pouch can hold easily lost components, and a sleeve pocket can hold spare magazines, a box of ammunition or similarly sized objects.

Included in the Pro Maintenance Bench & Range Mat is a leather impact pad to rest a firearm on while pushing pins to avoid marring the finish, along with a solid-plastic composite pad to serve as a substantial base. These are attached to the pad with a small section of Crosstac's Grip-Cord to prevent losing them in transit.

The pad measures 18x24 inches open and approximately 9x12 inches folded. The mat is well thought out and features little refinements that make life easy. The corners are magnetic to hold metal springs and pins. One side of the pad is a multi-cam finish to blend in, while the other is a proprietary rubbery finish called ToughTek. It is solvent resistant, in case a bottle of gun-cleaning product spills.

This pad is the perfect work surface when you can't take your at-home work station with you into the field. (MSRP: \$59.99)



# BUFFALO BORE AMMO

Buffalo Bore produces some of the hardest-hitting ammunition on the market. For protection against dangerous medium-sized game, stopping power is found at the end of a deep wound channel. Where hollow-point rounds and lightly jacketed full-metal jackets fail to penetrate, Buffalo Bore hard-cast lead achieves significant penetration without deformation through hide, muscle and bone.

Three feet of straight-line penetration through living tissue is common and reported by Buffalo Bore. Recently, the company sent samples of its #21C ammunition for testing and evaluation in the SIG P220 10mm featured in this article. The ammunition did not disappoint and proved to be reliable, accurate and manageable under reasonably paced and rapid semiauto fire.

According to Tim Sundles, the owner of Buffalo Bore, this is the absolutely heaviest bullet that can be fired through 10mm pistols. I was advised that this ammunition should be used only after breaking in the pistol with standard-velocity ammunition.

After a couple of hundred rounds of standard ball, more than 100 rounds of this hard-cast ammo was put through the pistol ... with no malfunctions. The 220-grain solid point pushed with slightly more noticeable recoil but not enough to make follow-up shots slower.

This ammunition is shipped well protected in a cardboard and styrofoam container that separates each round from the others. Extreme care is used in manufacturing and shipping this ammunition to ensure it arrives undamaged.

Carry this ammo, be proficient in your marksmanship, and you'll get home undamaged if the need ever arises to use this on dangerous game.



***“... THERE WERE ABSOLUTELY NO ISSUES USING THE PISTOL WITH GLOVES ON. IN THE ABSENCE OF COLD WEATHER, THIS WAS THE BEST ALTERNATIVE I HAD TO SEEING HOW IT WOULD PERFORM WITH PROPER ATTIRE ON.”***



◀ Using the SIG P220 10mm Hunter with gloves did not impede performance or the activation of any of the controls.

overzealous conservation officer might construe the use of a weapon light on a firearm during firearms season as evidence of poaching. So, although a weapon light on this firearm makes perfect sense while camping in dangerous game territory, you should consult your local laws regarding having one on your hunting handgun while in the woods before sunrise and after sunset during hunting season.

## RANGE PERFORMANCE

The SIG P220 10mm Hunter handles like a natural extension of the arm. Starting at a low-ready position, it comes up on target quickly, and the TRUGLO front sight is picked up very quickly against the solid black rear sight. Dropping the safety and re-engaging it is done with either thumb.





## Buffalo Bore Ammunition

- Part #: 21C Outdoorsman
- Bullet: 220-grain, hard-cast lead, flat nose
- Velocity: 1,200 fps
- Energy: 703 foot-pounds of pressure

### MSRP

\$31.55 per box of 20 rounds

› During testing, the author used ammunition from various manufacturers, including SIG Sauer, Hornady and Buffalo Bore.

The only control I had difficulty with was the slide release. The magazine release is accessible with little very little movement from the shooting grip. Power stroking and slingshotting the slide were more reliable than releasing the slide lock with the shooting hand thumb. I attribute this to the heavy recoil spring necessary for handling snappy 10mm loads.

As a hunting pistol, this handgun is better designed for follow-up shots. Compared to my Jojo's Gunworks custom .357 magnum double-action/single-action revolver, the SIG P220 10mm Hunter's consistent, 5-pound SAO trigger pull lends itself to more accuracy. There is less travel in the trigger and less effort needed to break another shot.

Instead of using human silhouettes in this test, I worked with multiple bull's-eye targets. I ran "four corners" drills and moved in different directions from one target to the next. Rather than shooting at one fixed spot, I forced myself to acquire a new sight picture for each shot. Again, the bright glow of the green front sight contrasted against the target and did not bleed into the background. The sight will certainly stand out against any animal fur when used for hunting.

### RECOIL MANAGEMENT

The weight of the SIG P220 10mm Hunter is found in the frame of the handgun. The firearm's all-steel construction weighs 44.75 ounces, and the added mass makes shooting the 10mm round comfortable. Compared to a lightweight polymer handgun, the heft of the SIG soaks up the force and transfers very little to the user.

In the initial outing of the pistol, a couple of hundred rounds of SIG Sauer full-metal-jacket ammunition was used and then followed by SIG Sauer V-Crown and Hornady Critical Duty hollow-point ammunition. Even after hundreds of rounds of ammunition fired, I experienced no fatigue or aches. The reputation of the 10mm round being too powerful for the average shooter is hard to believe after a session at the range with the SIG P220 Hunter.

### GLOVED USE

One test that I made a point to conduct was using this pistol with gloves on. It is always fair weather inside a covered shooting range. This is not the case out in the field during hunting season, when the temperatures outside are nothing like those inside.

Using varying weights of gloves—unlined to heavily insulated—I ran the pistol through its paces again. The trigger guard, being generously sized, allowed me to access the trigger and maintain good trigger discipline. The ambidextrous safety was also easily manipulated, as was the magazine release. Racking the slide was no problem, and there were absolutely no issues using the pistol with gloves on. In the absence of cold weather, this was the best alternative I had to seeing how it would perform with proper attire on.



### WHEN IT COUNTS

SIG Sauer's motto is, *When it counts*. If that scenario happens to be you staring down the sights at a trophy record or charging animal, this pistol is going to deliver. The P220 10mm Hunter performed as intended and delivered the accuracy needed to get the job done.

Don't trust your hunt—or your life—to anything less than this new chapter of the SIG standard. **ASG**

### SOURCES

- › **SIG SAUER**  
[WWW.SIGSAUER.COM](http://WWW.SIGSAUER.COM)
- › **BUFFALO BORE AMMUNITION**  
[WWW.BUFFALOBORE.COM](http://WWW.BUFFALOBORE.COM)
- › **CROSSTAC CORPORATION**  
[WWW.CROSSTAC.COM](http://WWW.CROSSTAC.COM)



A close-up photograph of a person's arm and hand in camouflage clothing, holding a black cord. The background is a blurred forest scene with trees and foliage.

# **TRACKING** **BASICS**

**TECHNIQUES AND SKILLS FOR THE MODERN SCOUT**

BY CRAIG CAUDILL PHOTOS BY JENNIFER CAUDILL







It is simply a given that those of us who want to be ready for disaster in a wilderness or an urban setting should have good awareness skills. When considering awareness, we often think it is a gift some are born with and others not. Nothing can be farther from the truth. Surviving is just as much about training as it is instinct. As with any physical skill, developing your awareness will take time, patience and practice. The U.S. military has invested more time, money and effort than any entity into making sure they have good awareness. The U.S. government wants to ensure the survivability of its soldiers. What we will do here is utilize some of those methods, add in our own research and condense it down to a language that is usable by the everyday citizen—like you and me.

The human body is an incredible sensor. We have the ability to take in information that is afforded us and make logistical, sometimes critical, decisions based upon it.

Let's consider each of the senses and point out some ways to increase your awareness utilizing them. Please note that we will go over sight last and consider it in great detail.

## SMELL

We often overlook utilizing our noses to gather information. However, it can lead to a number of answers. Your nose can detect food preparation, human waste, body odor, vehicle exhaust, determine the level of food freshness or decay, and detect animals.

For those of us who spend a lot of time hunting, scent control is key to remaining undetected.

Some animals use their noses to detect scent for their safety (coyotes, deer, scent dogs). If you have observed this, you will see them blow out a fair amount of air as they are trying to pinpoint what they detect in the air. The effect of this is to discard any scent particles in the nostrils to ensure they are getting an accurate scent, rather than a scent "by-product" that is hanging around in the nostrils. We can use this example for ourselves.

When you think you smell something you're looking for, make it a regular practice to exhale each time you attempt to take in scent. We teach students in our tracking classes to note the smell herbaceous and woody material puts



◀ Above: The top five tools for observation and awareness

◀ The author is using his sense of smell to detect the aging of sign.





off when it's broken and how long the students can smell it. Consider that you are tracking a person or an animal in a hunting situation: You find a freshly broken limb and smell it. You note that it is incredibly fresh. This helps you estimate the passage of time of the subject you are tracking.

## SOUND

Ask any infantryman or Marine, and they will tell you with certainty it is not hard to distinguish between the sounds of their small arms fire versus that of their enemy.

This is one way that utilizing your auditory senses will serve you well in a similar situation. You can also identify important information such as vehicle sounds; gear sounds such as zippers or hook-and-loop strips; and animal sounds. Even the lack of sounds or complete silence can be an indicator of something amiss. Additionally, simply cupping your hands around your ears will help gather sounds for your discernment. It is an incredibly valuable amplifier when you "think" you hear something but are not quite sure.

A wonderful example is one we use in law enforcement tracking on a regular basis: When chasing/tracking someone in a neighborhood, you will often locate where they are running and sometimes hiding simply by the sounds of dogs

› The author shields his eyes from the sun to better observe the forest.



› Below: Utilizing the sense of touch to determine the age of the fire



barking. If a fugitive is running from yard to yard, dogs will be barking in each yard as the person travels. This is an indicator you can use to set a more dedicated and accurate perimeter.

## TOUCH

You can use your sense of touch to obtain important information about temperature. Feeling a vacated deer bed, the coals of a fire, the engine or exhaust of a vehicle, or the barrel of a weapon will give you indications of how long it has been since activity occurred with each.

If you are in pursuit of someone in a vehicle and they get away from you and park, you can quickly assess which vehicle was most recently running by placing your hand near the grill or hood of a car and feeling for heat.

## SIGHT

Each of the other senses can provide us with an incredible amount of information. However, it is our eyes that provide us



with vast amounts of information every second. Science has proven to us that the human eye passes approximately 10 to 15 million bits of data to the brain every second. The issue for us is knowing how to take that information and use it for our purposes. That is why considering the sense of sight is incredibly detailed and important to understand.

We are going to consider the following ways of utilizing our eyes to gather information and be more aware.

### SCANNING, TRACKING OBSERVATIONS AND “SALUTE”

Before we detail those, let's first consider the difference between looking at something versus actually seeing something. *Looking* is when you direct your gaze in a specified direction. *Seeing* is becoming aware of something from a visual source. The world is populated with people who very rarely, if ever, do much more than look around them. Those of us who want to be more aware need to focus our attention on the pieces of information out there and put them into the “filing cabinet” of information we carry around with us—our brain.



◀ Using the sense of smell to detect aging of sign

### SCANNING

Scanning is an even more deliberate use of the eyes than simply seeing. Scanning is done when there is a location you need to assess but the information you need is not obvious. This can be as simple as scanning an incredibly large area of ground to see if there is equipment or people deserving your attention. Once you see something from the large area that needs your attention, you can then focus on a smaller section.

To scan a large area of forest, large city or open ground, you should start closest to you first. Scan the entire width of the area you can see; then, in your mind, expand your field of vision another 100 meters and do it again, going in the other direction. Continue this stepping back and forth every 100 meters. This allows you to make a quick scan of the area for any threats or information that proves usable. Once you have made the initial quick and large scan, go back and do it again—this time, taking much more time to see the area.

If you come to an area of interest, stop and focus on it. I focus by visually making a box around the place of interest. Once that is complete, I visually make an “X” through the

▶ The author uses a monocular to observe surroundings.





corners of the box to see items of interest within it. In this way, I can focus directly on a specific spot. Again, I do this slowly and deliberately.

### ESTIMATING DISTANCES

There are some simple points to consider about distance. If you are looking at something or someone on a contoured, hilly or similar kind of ground, that object will seem farther away. If you are looking at an object across flat ground, such as a beach, ocean or open plain, that object will seem closer.

You must also take into account the light conditions when looking at these objects. If you have the sun at your back, the objects you are seeing will be lit up by the sun, and the object will appear nearer. If the object you are seeing has the sun behind it, the object will seem farther away.

To be more specific, we can utilize the human form to estimate distance. This is a valuable skill, because humans are typically our biggest threat in most situations. I am fortunate to have had good precision rifle instructors who offered this information to me.

If you are observing a human with the

***“A GOOD TRACKER IS SOMEONE WHO HAS DEDICATED A LOT OF TIME AND ENERGY INTO SEEING THINGS WHEN OTHER PEOPLE JUST LOOK.”***



◀ Left: Observing and measuring whitetail deer track



◀ Below: Following the same procedures for human track



naked eye at—

**200 METERS:** Their face will be visible, and you will see good detail.

**300 METERS:** Their face color can be seen, and body outline is still good.

**400 METERS:** No facial details; body outline good, all other details are blurred.

**500 METERS:** Body taper is seen; head is not noticeable.

**600 METERS:** The body appears to be a triangle.

### INSIGHT OF A TRACKER

More often than not, trackers are well known to the general populace as a romantic, movie-based persona; that is simply not true. Tracking is also depicted as a skill that only a special few can possess; this is partly true. A good tracker is someone who has dedicated a lot of time and energy into seeing things when other people just look. There are five visual indications that a tracker looks for when detailing a track. You can begin to expand your ability in this area by looking for these, as well.

**OUTLINE:** The outline of a track will help us identify the quarry we are after.

**SHAPE:** Humans with shoes always leave tracks with discernible shapes and at 90-degree angles.

**CONTRAST:** Does an area look “different” from the area around it? Trackers refer to this as “disturbance.” That is, something has changed the baseline of what was there.

**COLOR:** Transference is often seen in tracks. Water gets splashed on a stream bank; mud carried onto the top of leaves will be a different color than what was there and is often very noticeable to the trained eye.

**TEXTURE:** Whatever the baseline of the ground, tracks will change that. If it was smooth, a track will often rough it up; if it was rough, a track will often smooth it out.

With these basics, you can begin to see more tracks around you. Another way to get better at tracking is to simply watch how people walk. Imagine them walking on a beach and what kind of tracks they would leave. Do they walk with their feet spread out, pigeon toed, drag their feet or something else? You can do this at the mall, grocery store or in the woods. By watching people walk, you can get a feel for what kind of tracks they will leave.

### “SALUTE”

The military utilizes the acronym, SALUTE (size, activity, location, unit,

***“THOSE OF US WHO WANT TO BE MORE AWARE NEED TO FOCUS OUR ATTENTION ON THE PIECES OF INFORMATION OUT THERE AND PUT THEM INTO THE ‘FILING CABINET’ OF INFORMATION WE CARRY AROUND WITH US—OUR BRAIN.”***

time, equipment; see the sidebar to the right for a detailed description) to help individuals or teams pass on information to others for any given situation, incident or mission. SALUTE will help you organize the who, what, when and where of these situations.

We can easily use SALUTE for our purposes when seeing a situation and then using what is gained to make decisions. Primarily, this is used when we need to share information with others. It makes the process more efficient when we can keep it in a standard format such as this. It is much easier for those who are analyzing it or making decisions based upon it. This also allows the individual on their own to be more efficient.

When doing reconnaissance or otherwise gathering information or intelligence, you should know what information you need to compile. This allows you to get it, get out and make an analysis so you are not compromised or in extended situations of high danger. If done regularly, you will become natural at being more aware of your surroundings. **ASG**







# SALUTE

**SIZE:** This can refer to the number of people. For example, you come across an abandoned house during a hurricane aftermath. You determine, by the number of active beds, how many people are in the area. If there were an assault, could you or your group defend the position?

**ACTIVITY:** This is where you note, even if it is only in your mind, the specific activities you see going on. An example is watching a crowd at a concert. Good security personnel will see the rhythm of how the crowd is working. When an individual or small group in that crowd is out of that rhythm, it is typically someone to pay attention to. If you are in crowded movie theater, and everyone is shuffling in and finding seats—but one person is pacing back and forth—that person is someone to pay attention to and discern what the issue is.

**LOCATION:** Pre-planning is a good idea for disaster preparedness, in particular. We all know people race toward grocery stores during a disaster. Besides the obvious notation of where safe travel corridors are away from such places, you should also note other areas to get supplies. Also note the location when you travel, even for a dinner out, to figure out how you will get out of an area if there were to be some sort of unexpected event.

**UNIT:** In military use, this helps the individual determine the abilities of those they are observing. It could also be as simple as observing body language and noticing how people carry themselves to determine their strength, and awareness—or lack thereof. After 25 years of studying martial arts, when someone walked into my facility, I could almost always tell if they were a martial artist. If they told me they were new to it, I knew they were either lying (or my assessment was incorrect). If they were lying, they were definitely a threat.

**TIME:** Mind the time. If you note times of activity, you will start to see patterns. Once you recognize patterns in people, groups of people and animals, you can then more easily predict future events. It is the reason I never take the same exact way to and from the gym each day. My gym is in an area you can access from several different routes. If someone wanted to pattern me, it would be difficult.

**EQUIPMENT:** You can assess the supplies others have that might be of use to you, your group or family. Do those people look clean, hydrated and fed? If so, ask yourself where they are getting supplies. How can you also get them? I trained a large group of search-and-rescue special operations personnel who were tasked with searching for survivors in the aftermath of hurricane Katrina. That situation was so bad that even they were running out of fuel. They observed that some of their law enforcement counterparts had plenty of fuel. After observing where they were getting it, they took some for themselves.

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# SIGNAL MIRRORS FOR RESCUE

OFTEN CONSIDERED UNDERRATED SURVIVAL KIT ITEMS, THESE MIRRORS CAN MAKE THE DIFFERENCE BETWEEN LIFE AND DEATH

BY JOHN D. MCCANN

PHOTOS BY JOHN D. MCCANN AND DENISE MCCANN





**VECTOR 1**

1. Reflect light from mirror onto your hand.
2. Slowly bring mirror close to your eye and look through star at the reflected light on your hand. A bright light spot will show in the star. This is the aim indicator.
3. Hold the mirror close to your eye. Slowly turn and angle mirror so the aim indicator is on the object you wish to flash.
4. Continuously sweep the horizon even if no one is in sight. StarFlash signals can be seen for many miles, even in hazy weather.

**Mini Rescue Flash**

**SOL**

**StarFlash<sup>™</sup> signal mirror**



1. Reflect light from mirror into your hand.
2. Slowly bring mirror close to your eye and look through star at the reflected light on your hand. A bright light spot will show in the star. This is the aim indicator.
3. Hold the mirror close to your eye. Slowly turn and angle mirror so the aim indicator is on the object you wish to flash.
4. Continuously sweep the horizon even if no one is in sight. StarFlash signals can be seen for many miles, even in hazy weather.

**StarFlash<sup>™</sup> Signaling Instructions:**

- Reflect light from mirror onto your hand.
- Slowly bring mirror close to your eye and look through star at the reflected light on your hand. A bright light spot will show in the star. This is the aim indicator.
- Hold the mirror close to your eye. Slowly turn and angle mirror so the aim indicator is on the object you wish to flash.
- Continuously sweep the horizon even if no one is in sight. StarFlash signals can be seen for many miles, even in hazy weather.

**US<sup>™</sup>**  
**Ultimate Survival**  
*Best Performance Outdoor Tools*



**Rescue Flash<sup>®</sup> Signal Mirror**

**SOL**



1. Hold mirror edges so as not to block mirror surface. Reflect sunlight from mirror onto your hand or nearby surface.
2. Bring mirror close to your eye and look through star at the reflected light on your hand. A bright light spot will show in the star. This is the aim indicator.
3. Hold the mirror close to your eye. Slowly turn and angle mirror so the aim indicator is on the object you wish to flash.
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**USE EMERGENCY USE ONLY**



**O**ne of the most important signaling devices you can have in your survival kit is a signal mirror. It is often underrated as a signaling device but is a very valuable tool for day-time signaling. It can even be used at night with a full moon. During the day, with a good sun, the flash from a signal mirror can be seen for more than 10 miles.

There are many types of mirrors available on the market, and they come in many shapes and sizes. However, because this is an important item, you should try to get the best mirror you can afford.

### RETRO-REFLECTIVE GRID

I often recommend signal mirrors with a retro-reflective grid. A retro-reflective grid allows the user to be very accurate in aiming the mirror. This is important, because you want to make sure the flash from the mirror is aimed directly at the place you want, such as on a rescue aircraft.

It is not difficult, but let's first explain how a retro-reflective grid works.

A signal mirror with a retro-reflective grid has a hole in the center for viewing through the mirror. A small screen mesh-

➤ The author's wife, Denise, flashes a signal mirror.



➤ Below: The author shows the flash from the sun's reflection off the display of his smart phone, which he uses as a signal mirror.

***“DURING THE DAY, WITH A GOOD SUN, THE FLASH FROM A SIGNAL MIRROR CAN BE SEEN FOR MORE THAN 10 MILES.”***





***“THERE ARE ALSO OTHER ITEMS YOU CAN USE IN AN EMERGENCY—BASICALLY, ANYTHING THAT CAN REFLECT THE SUN.”***

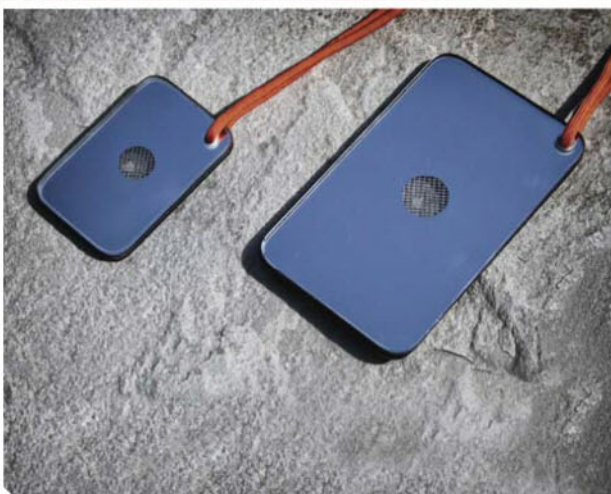
type material is installed in this hole.

However, before the screen mesh is installed, it is first coated with small spherical beads. These beads work on the same principle as street signs, which reflect the lights of your car directly back toward you. Retro-reflective technology, which allows a high angularity of reflection, was first invented by 3M. The high angularity of the reflection causes the reflected light to return on the same path as it originated, as opposed to off at an angle.

The hole in the center of the mirror allows you to look through the center for aiming purposes. The retro-reflective grid catches the sun's rays and creates a small burst of light on the grid. This small burst is not the sun; it is really a reflection on the grid and is called the "aiming indicator." If you move the mirror and place this small burst directly on your target, gently moving the mirror back and forth, you will be flashing the reflection from the sun directly on your target.

It is that easy, and it is extremely accurate.

There are a few companies that manufacture this type of mirror. One is



# EMERGENCY SIGNAL MIRRORS

BY FRANCISCO LOAIZA

With everyone going "green" these days, I like trying to find new ways to re-use broken or used items for a purpose other than their original design. And with technology changing so rapidly, we are often left with many "cyber-junk" items.

What do you do with your broken hard drives or your old 5 gigabyte hard disks that are no longer useful to you? I found a pretty good way to both recycle and reuse parts from old computer hard drives to use them as emergency signal mirrors.

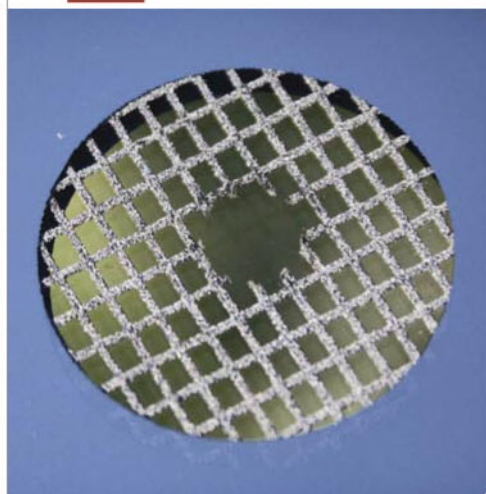
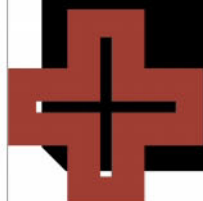
Where I work, we come across many hard drives on a monthly basis that need to be destroyed and disposed of. Most hard drives are housed in an aluminum housing that can be recycled, but you first need to remove all the screws, circuit boards and other parts that your local recycling center will not be accept.

I discovered that the hard drive platters, themselves, are highly polished metallic discs that are nearly indestructible. I give these platters to the Boy Scouts in my troop. They use them as emergency signal and camp mirrors.

Quick Internet research reveals that the newer hard-drive platters are composed of several materials, including ferro-magnetic and nonmagnetic materials that are cobalt, platinum and chromium based. These materials, or some combination thereof, are then coated on fused aluminum oxide substrate discs.

I have tried to break these "signal mirrors" by throwing them on hard ground quite violently and have only been able to break them by "accidentally" dropping them from a four-story balcony (of course, after making sure there was nobody down below).

These are great and durable signal mirrors, and I always carry one with me while in the wilderness.



◀ *Top left:* Coghlan's 2x 3-inch laminated-glass signal mirror with grid

◀ *Bottom left:* A 2x3- and 3x5-inch laminated glass signal mirror made by S.I. Howard Glass Company. These mirrors have a retro-reflective grid with a hole in the center.

◀ *Near left:* An aiming indicator, looking through the hole of a signal mirror with a retro-reflective grid. It is a reflective burst from the sun that appears on the grid. Just place this "burst" on your target, and the mirror will flash directly on it.



S.I. Howard Glass Company, which makes laminated-glass signal mirrors in 2x3 and 3x5 inches. They are shatter-resistant and feature directions for use printed on the mirror backs.

Another manufacturer is Coghlan's, which bought out Vector 1, the original manufacturer of these mirrors. Coghlan's offers a 2x3-inch laminated glass that is shatter-resistant. Also offered is the Sight-Grid Signal Mirror, a thin, glass signal mirror encapsulated in a break-resistant acrylic. Each mirror has directions on the back and features a reinforced lanyard hole.

The next mirror is the Rescue Flash, which is manufactured by Adventure Medical Kits and also uses the retro-reflective grid. It is made from durable Lexan polycarbonate and also has directions printed on the back. The Rescue Flash is an effective mirror that comes with a protective cover to prevent scratches when stored in a survival kit or pouch.

## OTHER MIRROR TYPES

There are other signal mirrors available that do not have a retro-reflective grid.

◀ Below: Some items that can be used as an improvised signal mirror. Clockwise, from the top left: a small digital camera, a cell phone and a handheld GPS.



These are less expensive, but I do not recommend them. Some have a sighting hole in the center, and some don't even have that. They will work for their intended purpose—but not as well as a good-quality mirror.

## IMPROVISED SIGNAL MIRRORS

There are also other items you can use in an emergency—basically, anything that can reflect the sun.

If you are in a vehicle, you can remove the rearview mirror and use that. Alternatively, you can use the polished end of a soda can, an old music CD or video DVD, a computer hard drive or even the shiny surface of aluminum foil. However, you rarely have these items around when you need them.

After some experimentation, I have found that the glass or plastic display from items such as a smart or cell phone, small digital camera or a handheld GPS provide adequate reflection of the sun for use as an improvised signal mirror.

Keep in mind that an improvised mirror is never going to be as effective as a mirror designed solely for the purpose of signaling. I recommend carrying the real thing. (Of course, in an emergency situation, anything is better than nothing.)

## ALTERNATE AIMING METHODS

There will be occasions when the angle of the sun will not allow the use of a retro-reflective grid to aim a signal mirror. In this case, you will need to use an alternate aiming method, as you would with a mirror that does not have a retro-reflective grid.

Hold one arm outstretched and spread your index and middle figure, make a "V" (like the "victory" sign). It doesn't matter if you have your fingers facing toward or away from you.

Hold the signal mirror in the opposite hand. Get the sunlight to reflect off the mirror and manipulate it until you can reflect the sun onto your outstretched fingers. The reflection of the sun should be across both outstretched fingers so that the reflection of the sun will pass between the two fingers. This means that the sun's reflection is being aimed straight ahead, between your fingers.

Keep your eye, signal mirror and outstretched fingers in a straight line. Carefully move the outstretched hand, keeping the reflected sunlight between the two fingers, until you have your target between them. This can take some practice, and your movement must be slow and methodical in order to keep everything lined up. At this point, move the mirror gently back and forth, which will flash your target with the sunlight from the mirror.

Sometimes, you will have the sun to your back but need to signal forward. In this case, you will need to lay on your back, the top of your head facing the sun. Hold the mirror in one hand and reach back with that arm.

Raise the other arm up and forward and spread your index and middle figure, making

◀ Near left: The left mirror is Coghlan's Sight-Grid Signal Mirror; the right mirror is Adventure Medical Kits' Rescue-Flash Mirror. They both have retro-reflective grids.



◀ Below, far left: Mirrors sold as signal mirrors but without a retro-reflective grid for aiming.

Top left: the Featherweight, which is very thin and made of metalized polymer. Top right: a Star Flash with a star shape in the hole. Lower left: a compact mirror made from highly polished metal and small enough to carry in a wallet. Lower right: This mirror is red on one side and a regular mirror on the other. It doesn't even have a sighting hole. The red side is supposed to be used at night with a high-power flashlight (the author has not found it to be very effective).



## **“A RETRO-REFLECTIVE GRID ALLOWS THE USER TO BE VERY ACCURATE IN AIMING THE MIRROR.”**

a "V," as with the standing technique. Try to keep your hand behind your head, which is holding the mirror, in a straight line between that hand, your aiming eye and your outstretched fingers.

Catch the sun's reflection on the mirror behind you and direct it through the "V" of your forward fingers. You can always shift your position on the ground to ensure you are in line with your intended target. This can take some practice, so you might want to work on this technique before you need it.

As you can see, using a signal mirror is not difficult. However, it is a skill you should practice before you actually need it. Practice signaling on an object other than an airplane, because you don't want to give a false impression that you need help.

But when you do need help, knowing how to use a signal mirror quickly and effectively can get you rescued.

Hopefully, this article has helped you identify the various types of available signal mirrors so you can select the best one for your needs. You should also know the various types of devices that can be used as improvised signal mirrors in the event you are caught in an emergency situation without a real one.

Lastly, if you don't have a mirror with a retro-reflective grid or are not able to use it because of the sun's position, you will understand the alternate aiming techniques. **ASG**

### **SOURCES**

- **ADVENTURE MEDICAL KITS**  
(800) 324-3517  
[WWW.ADVENTUREMEDICALKITS.COM](http://WWW.ADVENTUREMEDICALKITS.COM)
- **COGHLAN'S**  
(877) 264-4526  
[WWW.COGLANS.COM](http://WWW.COGLANS.COM)
- **S.I. HOWARD GLASS COMPANY**  
(508) 753-8146  
[WWW.HOWARDGLASS.COM](http://WWW.HOWARDGLASS.COM)

**1** The reflection of the sun off the mirror and onto and across two fingers. The reflection is now between these fingers.



**2** The author uses two fingers as an alternative method for sighting a signal mirror.



**3** The author demonstrates the technique for laying on your back in order to signal when the sun is behind you.



**4** As instructed by the author, students practice aiming a signal mirror using the author's wife as a target. (Photo: Dave Tameling)







# MARTIAL ARTS

## WHAT ARE YOU REALLY GETTING WHEN YOU SIGN UP FOR CLASSES?

BY MICHAEL D'ANGONA

**M**artial arts are a great way to stay fit, get regular exercise and learn a valuable means to defend yourself from those out to do you harm. You've no doubt seen countless ads in flyers, park benches or colorfully painted on dojos' own store fronts. Slogans such as, "Join today, and learn to protect yourself from bullies" or "Defend yourself with confidence!" are splashed everywhere, enticing you to call, check the website or walk in and watch a class.





GETTY IMAGES.COM/BY LORADO



If you have the opportunity to join one of the many diverse martial arts available, you can profit greatly. Yes; you can get a form of exercise, relieve stress and learn techniques intended to teach you to protect yourself if attacked.

However, there are many fallacies related to the martial arts world that need to be confronted before you can tighten that colored belt around your waist and take on the “bad guys” of the world.

### JOINING DOESN'T MAKE YOU A MASTER

After your paperwork is signed, your uniform is in your hands and your schedule for classes is planned, the work begins. Your ability to make the time for two or three classes a week is crucial for you to advance past the beginner stage of the martial arts. Consistent training is the only way for you to not only understand the techniques taught, but to perform them without hesitation, as well. This can be defined as ... experience. Without experience to back you up, all you have in your repertoire is a series of movements with an intended final purpose—not movements that are second nature for you that will come out with explosive results if and when they are needed.

You cannot speed up the hundreds upon hundreds of hours needed to successfully



GETTY IMAGES.COM/BY: CINESTUDIO

◀ Martial arts are a great way for women to learn to defend themselves against an unprovoked attack. However, focused training that emphasizes overcoming larger and stronger attackers must be taught in class. If not, it's time to look elsewhere.

**“MARTIAL ARTS ARE A GREAT WAY TO STAY FIT, GET REGULAR EXERCISE AND LEARN A VALUABLE MEANS TO DEFEND YOURSELF FROM THOSE OUT TO DO YOU HARM.”**



GETTY IMAGES.COM/BY: PEOPLEIMAGES.COM

become fluid with what is taught. In addition, just going to your martial arts class doesn't equal “time put in.” If you go in with your *gi* (uniform) pressed and clean and leave the exact same way, it's highly unlikely you produced the necessary amount of sweat, intensity and overall effort during your class. If that is your case, you won't benefit in the long run by staying enrolled in the martial arts (unless, in fact, you're only there for exercise).

Remember, as with any other activity, you get out of it what you put into it. Valuable experience is the result for those who put in intense, rigorous workouts over a long period of time.

### ALL TECHNIQUES WORK EQUALLY

New martial arts students typically don't consider beforehand the practical application of that particular style of martial arts. Not all techniques are suited for all situations.

In fact, if you failed to do research prior to signing up at a certain school, you might have entered into a style that promotes competition over practical self-defense or one that concentrates on forms and *katas* (detailed choreographed patterns of movements) rather than on techniques that could possibly keep you safe if attacked. There are certain styles that lend themselves far better to practical self-defense than do others. It is up to you to do your homework prior to signing up to make sure you get what you truly need.

Also, when you get the chance to watch a class before you make your decision, be sure to notice these three important aspects:

■ **First**, does the instructor illustrate his techniques through words or actions? Teachers who only discuss the validity of techniques without performing them doesn't allow you to decide for yourself if these techniques would work in a real situation. Teaching through talking is valid to a point, but an actual demonstration tells a thousand words.



***“THERE ARE CERTAIN STYLES THAT LEND THEMSELVES FAR BETTER TO PRACTICAL SELF-DEFENSE THAN DO OTHERS.”***



◀ A sharp steel knife against your throat raises your adrenaline level, blood pressure and heart rate to levels not experienced during your daily training sessions.

◀ It's a good idea to begin martial arts at an early age, continuing throughout adulthood. This allows your techniques to become second nature, backed by years of hard work and experience.







**“... DURING A REAL FIGHT OR CONFLICT, YOU WILL USE ONLY ABOUT 10 PERCENT OF THE ACTUAL TECHNIQUES YOU LEARNED IN CLASS.”**

certain techniques must be altered so you don't fall victim to the injuries caused by the lack of the normally ever-present protective mats.

Specific techniques, such as sacrifice throws, full-body takedowns or any technique that might have you falling to the ground in order to overcome your

❗ **Second**, do they incorporate training weapons into their classes? With guns, knives, sticks and even a simple screwdriver easily available to today's attacker, the defense against weapons in class is a must. If it isn't part of the curriculum, move on.

❗ **Finally**, if you do decide to join, does the school present you with a high-pressure sales pitch or an easy-going short contract? If money seems to be the primary motivation, the level of qualified teaching is always in question. Only sign for what you feel most comfortable with, and if the pressure tactics continue, find the door and leave.

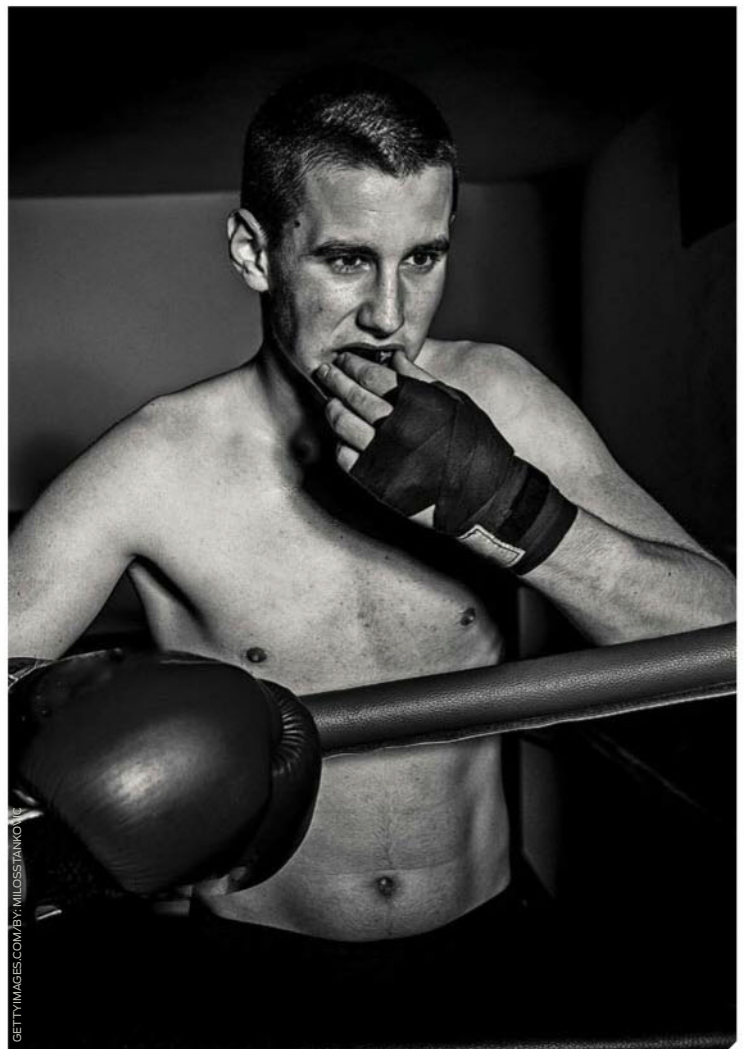
### **A FIGHT WILL MIRROR CLASS TRAINING**

It is said that during a real fight or conflict, you will use only about 10 percent of the actual techniques you learned in class. Consequently, when an unprovoked attack occurs, the way you perform a certain technique will be extremely different than what you are accustomed to. It should go without saying that all the "safety" equipment used during training will not be available to you during an actual self-defense confrontation.

For example, some martial art styles use mats on the floor to cushion falls, takedowns or throws; these will not be found on the concrete sidewalks outside. Therefore, your approach to

➤ Starting martial arts classes won't make you invincible against multiple attackers. Instead, steady, consistent practice over an extended period of time can make you more proficient when facing more than one attacker.

➤ Be sure to do your "homework" when choosing a martial arts style. Popular styles may emphasize sport over self-defense.







◀ Wearing protective hand gear is needed when training. However, in a real-life attack, you won't have such gear, so practicing bare handed throughout your training is a must.

opponent, must be avoided to protect yourself from possible severe injuries. To become accustomed to fighting in the real world, suggest having some of your classes outside the school's practice area or in the parking lot nearby. If this is not an option, practice with a friend on your own time and discover which techniques would work well outside and which would need to be altered.

Also, remember that your wrists won't be taped or protected by padded gloves, so hitting an attacker incorrectly may result in dislocation, hyperextension or fractures of your hands or wrists. To compensate for this, practice hitting a firm target bare knuckled in class daily or during home practice; this will condition your hands and strengthen your punch.

### A SIDELINE COACH WILL NOT ALWAYS BE NEARBY

No matter what martial art style you decide to pursue as a self-defense option, you will most likely always have the guiding words of your instructor ever-present during your training. He or she will give you on-the-spot tips for improving your technique, what you need to do next or how to overcome a perilous situation with an opponent.

However, in a true self-defense confrontation, you will be on your own. It will be up to you to make those micro-second decisions—ones that could determine whether you walk away from a confrontation or have to be carried away.

Unfortunately, there is no quick fix for this. Constant training and trial and error during your regular classes will give you the confidence to react instinctively and without conflicting thoughts. Self-defense techniques must come naturally, and this can only occur after you achieve consistent, successful responses to nearly anything your training partners can throw at you.

### YOU'RE ONLY HUMAN

Practicing a martial art is a great way to supplement any personal self-defense program. If you do your homework, find the right school and put in the needed time to become proficient at what you learn, you can really benefit.

However, if you enter into the martial arts world with preconceived ideas that you will become invincible and remain unscathed during any and all conflicts, your martial art "career" could be short lived. And, if you cross paths with the wrong person ... so could your life. **ASG**



◀ A martial arts class teaches discipline, confidence and personal defense, but it does not automatically turn you into an invincible fighter who is able to escape any confrontation unscathed.





# BE LIKE WATER

## THE SURVIVOR'S GUIDE TO HYDRATION

BY KEVIN ESTELA







# HEAVY COVER CANTEEN KIT



My canteen kit is in a constant state of evolution. What started as a basic canteen carrier for a bottle and nesting cup has become a small emergency kit for day hikes that is never far from my side. These items are good to have, just in case of an emergency, and are designed to supplement the tier-one gear carried. Some of these items are used frequently, such as the fire-starting gear, paracord and coffee. Other items, such as the cravat and emergency blanket, are carried for extreme circumstances. The central idea behind the water bottle kit is to have the basic gear necessary to survive a night out in the woods. With this kit, shelter, fire, water and some psychological needs are addressed. All of the items are carried in a Best Glide Zulu Pouch.

## SHELTER GROUP

SOLKOA heavy-duty emergency blanket  
50 feet type I paracord  
25 feet 550 cord

## FIRE GROUP

Exotac nanoStriker XL  
Vaseline cotton balls

## WATER

Heavy Cover titanium canteen  
Canteen cup  
Cup cover  
MP1 tablets

## SIGNALING

UST Micro Flash Mirror  
UST Jet Scream Micro Whistle

## FIRST AID

U.S. military cravat  
Mosquito head net

## MISCELLANEOUS ITEMS

Fishing kit  
Duct tape  
Coffee  
Titaniumspoon

Again, some of these items are carried as a backup to the pocket and belt kit items. Some of them are carried until the pack is set down in camp and inconvenient to carry around while gathering wood or attending to camp chores. It won't handle every problem, but it will make most issues much more bearable.

› The boiling efficiency of an alcohol stove is increased with a simple container lid.



**T**he water cycle is the continuous flow of water from and through the oceans, atmosphere and land. When we learn about the water cycle in school, we tend to think of it on a macro level. We examine how the water in our environment moves from bodies of water to the clouds to the ground and back through this pattern, again and again. We learn how water is constantly moving around us.

For the survivor, we must consider the water cycle and how this affects us on a daily basis. We need to think of the water cycle on a micro level. As we go about our day, we lose water through perspiration, respiration and digestion. We consume fluids to rehydrate our bodies and return our system to "normal" or what we believe is "properly hydrated."

The reality is, many Americans walk around each day partially dehydrated. In the field, we must be more vigilant of our water intake and excretion. We must know various methods of finding water, collecting it, treating it and carrying it. We, like water, must be fluid in how we view it, or we will never meet our daily needs.

## THE CANTEEN KIT

My good friend, mentor and former boss, Marty Simon of the Wilderness Learning Center, impressed upon me the importance of carrying a canteen everywhere. Whenever we would depart on plant walks or field exercises with our students during week-long survival courses, we would reach for our canteens and ensure they were full. Marty's canteen was





## “THE HUMAN WATER CYCLE ISN’T GOING TO STOP BECAUSE YOU’RE IN AN EMERGENCY SITUATION.”

part of his readiness plan, and he took his plan to the next level when he started to build his survival kit around his canteen. It made sense to keep some basic emergency and survival components handy.

The current canteen kit I carry is an evolution of the one I carried while lead instructor at the WLC. What used to be a stainless-steel Nalgene bottle is now a Heavy Cover titanium canteen. Both of these had nesting cups in the bottom. The items carried inside or strapped to the outside were purposely included to meet the various “rule of 3s.” An emergency blanket in the bottom of the kit provides a vapor barrier to the elements. A spare ferro rod tucked behind the MOLLE paneling is a backup to what I carry in my pockets. The emergency mirror and whistle are there to grab the attention of rescuers ... just in case.

Other items are tucked wherever there is space. These include water purification tabs, extra cordage, a mosquito head net, etc.

I make it a point to always have a canteen of sorts on me. Whether I’m commuting to work or in the field, I know the importance of water. Just as I appreciate lunch and pack that, I know I need to meet my water needs and always have a good canteen not far from my person.



◀ Regardless of your thirst or perception of how clean the water source, all groundwater must be considered in need of treatment.

### FIND IT

Eventually, the water you carry will run out. A gallon of water weighs more than 8 pounds, and even the most fit person can’t carry enough to last more than a few days without refilling. Locating water comes down to understanding how and where it collects.

Water flows downhill, but this doesn’t mean you should overlook natural hollows in trees that might contain water. I’m sure we’ve all seen water pool in tarps during a heavy downpour. Water does flow downhill, and it collects in low-lying areas. If you can identify the right geography from the landscape—such as valleys, bowls, draws and other natural funneling features—you might find water. If you see moss growing on rocks, the surface might be damp. This can be collected ... if you are willing to work for it, instead of holding out for a larger, more substantial source. In general, vegetation is a good sign water might be present. However, you need to understand that some vegetation can live in extremely arid locations with little water.

Standing pools of water can be excellent sources, but the water must be considered unsafe as is. If you found it, a four-legged animal probably found it, too.

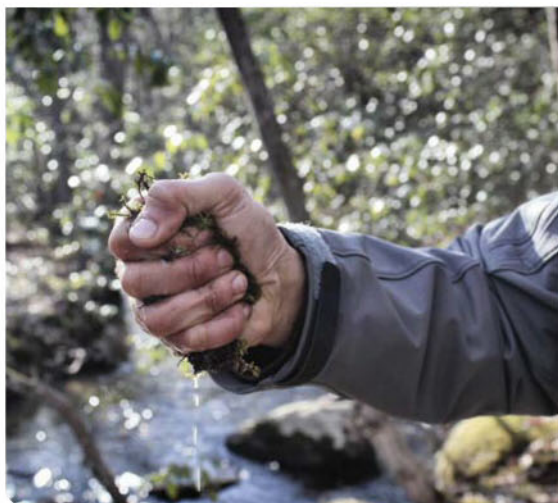
Easily accessible water is best. Tapping trees, using transpiration bags, collecting dew—all these methods require almost no energy output. I generally don’t teach solar-still techniques, because they require a lot of material and generate minimal amounts of water.

Remember: *The water you use must be replaced.* The human water cycle isn’t going to stop because you’re in an emergency situation.

### COLLECT IT

In an emergency or in times of dire thirst, we all will imagine finding that perfect watering hole. In a perfect world, we won’t have to treat found water, and we can cup our hands in it and bring it right to our mouths. However, water collection might require far less ideal

◀ Moss can be used as a means of collecting water. A handful can be squeezed to release water—which must be treated as unsafe until boiled or purified.



› An inexpensive Esbit stove is a lightweight option for boiling water. The cubes let off an unpleasant odor but will bring 16 ounces of water to boil easily.



means. By “collection,” I am referring to the method of taking it from nature and putting it into our control. Other than dipping our hands into water, there are many ways of ensuring water ends up under our control.

When collecting water, you might put the water through a process to filter it without purifying it. Filtering will remove sediment or particulates you may find disgusting to look at as you drink it. A bandana or T-shirt over the top of your container will work. If you are without a spare piece of cloth, a seepage basin dug adjacent to the questionable water source will allow the water to flow through the soil and filter naturally. The water in the hole will be clearest at the surface and should be collected from the top down.

A single strand of paracord can be used to transfer water from a dripping crack in the rocks to our canteens. The water will bead up and follow the cordage.

We can collect water using a bandanna if we attach it to our boot and walk across a wet field. We can collect water by tapping a tree and letting the sap flow out. Water can be collected by creating a basin out of an emergency blanket, poncho or contractor bag. If the color of the basin created is black, snow will melt on it during the winter and pool as water in the sunlight.

In urban settings, water can be found in many places; but not all are safe, due to chemicals. Don't drink pool water or the water found in toilets. Generally safe is water found in your pipes, as well as water heaters. If you are waiting out an imminent emergency such as a storm, collect water in your bathtub or in any containers you have. You can't have enough water.

### TREAT IT

In the field, the optimal way of treating water is boiling it. If you are already using a fire to keep warm, you don't use up any extra resources when boiling water. Opinions vary over how long you need to boil it. I bring my water to a strong, rolling boil for a minute or two. Some will say, “just to a boil,” while others say, “boil it for 5 minutes,” and others still, “boil it 10 minutes.” At the very least, bring it to a boil and keep it boiling for as long as you feel comfortable. Whenever possible, use a lid while boiling your water, because this will increase the temperature, as well as reduce both boil time and the amount of water that will evaporate.

Because a fire might not be logistically possible or safe, given your environment, it

› Water bottle purifiers are excellent for drinking on the go. Paired with a metal canteen, you have the option to boil in case the filter becomes clogged.



***“A GALLON OF WATER WEIGHS MORE THAN 8 POUNDS, AND EVEN THE MOST FIT PERSON CAN'T CARRY ENOUGH TO LAST MORE THAN A FEW DAYS WITHOUT REFILLING.”***





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**“YOU CAN’T  
HAVE ENOUGH  
WATER.”**

◀ Water purification tablets work well but require time to fully activate.



## 12 WATER TIPS

- 1 Add citric acid to metal canteens to remove strange flavors.
- 2 Drink at least half of your body weight in pounds-to-ounces of water per day.
- 3 Monitor urine color to gauge hydration. Be aware that some vitamins/minerals can change the color.
- 4 Transfer water from a canteen cup to the canteen to avoid dipping the threads in contaminated water.
- 5 Keep a small length of cord on your bottle to reach water sources just out of reach.
- 6 Always add a small amount of water to a container if attempting to melt snow.
- 7 Salt water can be boiled to release steam that can be collected and wrung out of a rag for fresh water.
- 8 Just because locals drink from a water source doesn't mean you should.
- 9 If you are left with no reasonable option, drink untreated water. You can get antibiotics—but there is no treatment for death from dehydration.
- 10 In the winter, only fill your canteen three-quarters full, or it will break when the water freezes.
- 11 Carry drink mixes to offset the flavor of water with a lot of organic matter in it.
- 12 Always dilute sugary drinks and make sure to drink extra water if you consume caffeine or alcohol.

▶ Water need not be clear to be drinkable. Organic odors and color may be undesirable, but the water will be safe to drink upon purification.



is wise to carry a backup option.

To survive, you may need other, one-person methods of treating water. These include chemical tablets and mechanical means in the form of individually-sized purifiers. Iodine tablets work well, but if the survivor is allergic to shellfish, they should not be used. Chlorine-based tablets work exceptionally well but require a longer wait time. Other chemical options include bleach and binary chemical treatments. Filtering devices work but should not be used in cold temperatures if the filter has a ceramic element. The ceramic can crack in the cold as absorbed water expands. The plastic can become brittle and break as you use the pump, too. The purifying filter can become clogged, so make sure you only treat water you've strained of large sediment. If you couldn't tell, these filters have moving parts and each moving part is a liability. All these secondary methods run out. Tablets are used up, and filters become less effective as they come close to their lifespan. Boiling is still the best option.

### CARRY IT, CARRY MORE

Your canteen will only carry so much, and if you truly are in an emergency, you should have the gear or know-how to carry more. The first place you should consider carrying water is internally. Don't strike off away from your water source without tanking up first. This means drinking water slowly and over time. Don't rush to fill up your stomach, because you cannot absorb water that quickly. If you have been sweating, you will likely need to consume even more. Avoid drinking too much water, because this causes hyponatremia, which dilutes your body of essential salts.

After having your fill, you should consider what you can find to carry water in. Reynold's Oven Bags, Platypus and Hidden Flask bladders, and Zip-Lock Bags all hold water just fine. If you don't have these, you can always improvise with a water-resistant cloth or material, such as your space blanket or tarp. If all else fails, you can resort to your knowledge of bushcraft and make a container or two out of birch bark (if it is available). No matter how you decide to carry extra water, make sure you are careful with your container. Don't damage it or drop the water you worked so hard to collect, treat and contain.

One form of water carrier I am not a fan of is the standard unlubricated condom. These will hold close to a gallon of water or more if there is a serious flow of water to stretch it open or if there is a body of water you can forcefully move it through to do the same. But a condom won't work well on a low volume body of water, such as a quarter-inch-deep creek.

The water cycle is a concept we must grasp to pass grade school, and it is one we must understand and respect to survive in the great outdoors. By breaking down the water needs of the outdoorsman, one can be prepared for the field and stay hydrated on a daily basis. **ASG**









# RUNNING IN THE SHADOWS

## HOW TO TRAVERSE HOSTILE ENVIRONMENTS, AVOID CAPTURE AND MOVE UNDETECTED

STORY BY MILTON J. THOMAS

**D**arkness looms in the desolate alleys behind the now empty buildings, and shadows grow long as the sun extinguishes itself on the horizon. As nightfall descends on any city, so does the criminal element, creeping from the cracks and fissures where the long arm of the law fails to reach.

Balancing the receipts with the cash in the register took longer than expected, and the thick stack of cash is evidence that it was a very lucrative day for your shop. Locking up, an uneasiness befalls you—that quiver in your stomach that tells you something is amiss. A noise, a rustling of debris in the wind, the scuffling of footfalls on the sidewalk in the dark and hushed whispers combine to spike your nerves. The bundle of cash for the bank weighs heavy in your duffel bag.

You start for your car but quickly realize you're being followed ... no doubt by two or three people intent on doing you harm, so you change direction. They've been watching you, following you, noting how frequent you visit the night deposit box at the bank and are ready to strike.

You must leave quickly, quietly, completely. If you are stuck on the wrong side of a riot, trapped behind the lines of a containment area because of some virus, surrounded by civil collapse after a natural disaster or are being tracked by thieves who wish you harm, you've become a pilgrim in an unholy hand.

Potential hostiles can be anywhere, and you've got to get to a safe place.



## ***“HAVE A PLAN—AND MAYBE AN ALTERNATE PLAN—THAT FOLLOWS THE MOST DIRECT ROUTE.”***

### **THE SCIENCE OF BLENDING IN**

The first order of business is to blend in with your surroundings and quickly become a zebra in a herd of zebras. The mind remembers whatever easily stimulates it. The brain contains a filter that sifts through all the sensory input received from eyes, ears and touch. Called the Reticular Activating System (RAS), it scans that input and determines what parts to filter out or ignore and what parts to pay attention to: specifically, what parts to notice. If you do not create a stimulus—color, sounds, threats, movements—a predator can key in on, you become “invisible.”

Your brain is very adept at ignoring the usual and perking up to the unusual. It can ignore the sound of a ceiling fan or the refrigerator running while you're sleeping, but you will bolt upright in a fraction of a second when you hear glass break or the screeching of tires on your street. That's your RAS at work, and it is always working to keep you safe and aware of your environment.

### **YOU ARE WHAT YOU WEAR**

In order to blend into your surroundings, it is best to wear the colors of your environment. Stuck in the forest? There's a reason soldiers wear camouflage, because it breaks up the lines and shadows of a human body and melts them into the chaos that is nature.

However, buildings, walls, streets, signposts and manmade objects normally found in any cityscape don't blend well, so you've got to use color to your advantage. If it is nighttime, wear dark clothing—blacks, blues and grays—and make sure nothing on you will reflect light. Sunglasses hanging from your collar or propped up on your head can easily glint off any available light and twinkle like a beacon. Avoid leather, not just because it is loud when rubbed against itself, but because it reflects light; and ditch the fancy belt buckles for the same reasons. You shoes should be light and rubber soled like a typical running shoe, and if you're traversing hostile terrain, odds are good



GETTY IMAGES.COM BY: PETER VISMAL

› Special Operation Forces sniper and spotter in camouflage Ghillie Suit



GETTY IMAGES.COM BY: MILPICTURES BY TOM WEBER

you're going to use them.

Is it daylight? Are there people around? You'll want to blend in with them. Wearing tactical clothing or an outfit that doesn't fit the surroundings (or the regular people in them) is a sure sign you don't belong. In other words, in a herd of zebras, don't be a camel. What are people around you wearing? Shorts because it's hot? Wear off-the-rack clothes, because it is a poor neighborhood, or polos and suits if you're in a wealthy area. Move how they move, act how they act. But most importantly, don't draw attention to yourself, and keep moving toward your goal.

If you find yourself threatened by capture and you've prepared yourself for just such situations, you've sewn a handcuff key into the hem of your jacket or subtly attached one to the zipper pull of your jeans. If you're really prepared, you've grabbed an easily carried bag filled with enough supplies to keep you alive for at least 24 hours. Consider a flashlight, some water and a few light snacks sealed in quiet packaging. Also in the bag, hide a couple of smaller items, such as micro tools, escape saw blades, a redundant handcuff key, mini screwdriver set and wire cutters.

If you are captured and, by luck, they don't view your water and food as threats, they might let you keep your bag with you. In that case, you'll be one step closer to escape. Learn the several ways to foil zipties, and remember that micro saw you hid? It can easily cut through rope.



# ESCAPE BY CAR

If you have access to a car, consider yourself lucky, because you're now behind the wheel of 2,500 pounds of gear that can quickly whisk you away to safety. But there are a few tips to keep in mind:

◀ GPS is not the best navigation. The system is designed to take you on the shortest course possible, and that course might take you back into the source of the trouble to start with. Ditch the electronics and consult a paper map, your knowledge of the neighborhoods and your instincts.

◀ Keep your doors locked and the windows rolled up. This includes the sunroof (keep the shade closed, too) and extinguish all lights inside the vehicle at all times. Light means anyone outside the car can better see what's inside. If you have to consult a smartphone, do so under your jacket or blanket to control the light.

◀ Don't stop for anything unless it is an emergency (or you see emergency personnel). Don't stop for directions, food, drinks or anything. Just keep moving.

◀ Stay focused on your driving. Turn off the radio, tuck away any distractions, and keep your eyes on the road ahead. Don't look around, and don't make eye contact with anyone you see.

◀ In David Borgenicht and Joshua Piven's *The Worst-Case Scenario Survival Handbook: Travel*, they suggest, "Drive on back streets, not main roads, and be prepared to abandon the car if the situation becomes critical."

◀ Avoid checkpoints, major intersections, barricades and any chokepoints.

◀ Be prepared to abandon your vehicle if it comes to that. This means that you need to keep any gear easily accessible. The last thing you want to do is waste time rummaging through your trunk for your B.O.B. or evac gear.



## ASSESS THE SITUATION

It is best to stay calm and observe your surroundings. If you are in the "wrong" neighborhood and in danger because of who you are, it is best to keep your emotions in check. Riots, urban conflicts, mass protests, worker's strikes and mobs are charged with emotions just waiting for something to touch them off. Violence is sometimes only a moment away. Distance yourself emotionally (and physically) from the crowd, and avoid mob mentality.

Jeff Anderson, president of The International Society of Close Quarter Combatants and author of *Survive the Collapse*, writes, "Forget everything you thought you knew about society. And forget about the police, military, or FEMA coming to your rescue. It's not a 'survival of the fittest' contest! Survival in this scenario has nothing to do with being fit or strong. It's about being prepared, having the proper knowledge, and knowing exactly what to do with it!"

When stuck in a hostile environment, avoid confrontation at all costs. Swallow your pride if you become a victim of someone's emotional outburst (e.g., a loud protester or an egg-throwing rioter), and display no reaction to being pushed or struck. Keep your head down and keep moving. If you're caught in the middle of a riot or some urban confrontation involving a lot of people, get to the outside of the crowd as soon as possible. Don't draw attention to yourself.

## WALK, DON'T RUN

Evading and escaping a potentially hostile situation is paramount, so leaving the threat behind you as quickly and quietly as possible is your number-one priority. But don't run.



# THE GHILLIE SUIT



Not every fight or flight situation takes place in an urban setting. Perhaps you'll find yourself in a situation that requires you to be completely hidden in a wilderness environment—something man was not designed to do well.

Enter the ghillie suit. The term, ghillie (or gillie), has its origins in 17th-century Celtic mythology, alluding to *ghillie dhu*, a disheveled, dark-haired male fairy who adorned himself in leaves and moss and resided in the Scottish Highlands. He was known for his protection of children.

Although there are off-the-shelf ghillie suits to be had, most military snipers construct their own suits, depending on the terrain they will likely serve in. Proper suits can take weeks or months to assemble. By building your own, you can use local flora, increasing the suit's effectiveness, as well as deciding what custom touches you want to add (pockets, pouches, clips, etc.).

Start with a camo base, a shirt or a jumpsuit on which you will need to attach some netting. Use earth-colored jute (or obtain your own from a burlap sack) and tie clumps of it to your netting. If you are dealing with different colors, be careful to place them as randomly as possible.

The idea is to erase the familiar human profile, especially the head. Add to the suit some leaves, branches, vines and grasses from your environment and pay special attention to the area most viewed (for example, will you be crawling on your stomach, or will you be sitting upright?).

Experienced ghillie suit makers "season" their suits after they are decorated. It is seasoned in a number of ways to give it an earthy smell and appearance, but mostly by leaving it outside for long periods of time, burying it in mud or dragging it through the dirt.

➤ Rioters throwing stones at police



GETTY IMAGES.COM/RY: GREGOR HONENBERG

***"IS IT DAYLIGHT? ARE THERE PEOPLE AROUND? YOU'LL WANT TO BLEND IN WITH THEM."***

Running only draws attention to yourself.

But, where are you going? Running off blindly down an alley is a sure way to become lost and quickly get into trouble. Have a plan—and maybe an alternate plan—that does follow the most direct route. Keep a map of your area handy, and know the streets, the alleys, the driveways. Where are the police stations, the train stations or a safe house (if you know of any)? Knowing which direction to go and having a couple of alternate routes to get there will ensure your odds of making it.

According to Lawrence A. Kane and Kris Wilder's *Little Black Book of Violence*, "It is important to pay attention to your environment at all times. Your best defense, particularly in areas that you are familiar with, is to know a variety of available escape routes for where you plan to travel."

## STOP FREQUENTLY, BRIEFLY

There are a couple of good reasons to stop frequently when traversing hostile territory, such as a riot zone or area cordoned off by martial law. Most important is to catch your breath so you can maintain a level of silence while you move ... but it is also to listen. Stay standing to stay alert, and be able to move suddenly if necessary.

You want to minimize your tracks if you are being hunted. Stay vigilant about your surroundings, and always reevaluate your plans.

➤ Vidigal favela, Rio de Janeiro, Brazil. These neighborhoods or shantytowns are known as *favelas* and are often run by armed drug gangs.

## BE OBSERVANT

It is important to know what is around every corner or over every rise in the road. What is there, and how could it be a threat to you? Approach corners cautiously, and peer around them by exposing the least amount of your body as possible, which means keeping your head straight and looking through the corner of one eye. Only your nose is



GETTY IMAGES.COM/RY: MARIO TAMA





exposed instead of your entire face.

Watch for movements in the shadows, as well as for small and unnatural sounds. If someone is determined to track you or persistent enough to attempt to capture you, the silent cat-and-mouse game will take place in the shadows.

They won't want to be seen as much as you don't, so you'll have to rely on other means. Did the crickets stop chirping? Did a dog suddenly start to bark? Can you hear footsteps, hard breathing, gear rattling or perhaps even the squawk of a radio or cell phone?

Kane and Wilder add, "Any time you are near others, especially strangers, it pays to be vigilant, striking a good balance between obliviousness and paranoia. If you can sense danger before stumbling across it, you have a much better chance of escaping unscathed."

### ANTICIPATE OBSTACLES

Proper navigation and knowing the layout of the streets or wilderness you are approaching will reveal any upcoming obstacles. Fences blocking alleys, dead-end driveways and barricades of any kind will hamper your progress, while knowing about them ahead of time could work in your favor. Don't walk through standing water (puddles or sewer drainage areas), because it will leave a trail and make your shoes loud; plus, walking any distance with wet shoes is never pleasant.

### KEEP COVERED

Use your environment to your advantage. Blend in with the buildings by staying close to them if you're in an urban setting. Walk on the side of the street that doesn't have streetlights and avoid places where light can shine at you from behind (crossing in front of a brightly lit storefront, for example). If you are in the wilderness, stay close to trees, and keep low around shrubs.

### AVOID OPEN AREAS

This goes for urban and wilderness travel. Open areas, such as large parking lots, wide streets, pastures and open fields, can be monitored from many different angles. By going through them, you are exposed—and so is your direction of travel.

### TRUST NO ONE

When you've come to the realization that your safety is threatened and the only solution to your immediate problem

## "DISTANCE YOURSELF EMOTIONALLY FROM THE CROWD, AND AVOID MOB MENTALITY."

is to extricate yourself from the area, the best thing for your safety is to trust no one. As far as you are concerned, everyone you don't personally know is part of the problem. If you are on your own, stay that way until your ordeal is over. **ASG**



◀ Proper navigation and knowing the layout of the streets or wilderness you are approaching will reveal any upcoming obstacles.

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**RELY ON PATHFINDER KNIFE  
SHOP'S "SCORPION" FOR  
HARD BUSHCRAFT USE**

STORY BY JOSHUA SWANAGON  
PHOTOS BY TANNER SWANAGON AND JOSHUA SWANAGON

# ***SURVIVAL OF THE FITTEST***



***“DURING CAMP SETUP, I USED THE SCORPION FOR MANY AND VARIOUS TASKS, SUCH AS CLEARING SMALL LIMBS OUT OF THE WAY, AMONG MANY OTHERS.”***

**T**here's a lot that can be said for experience, and Dave Canterbury is the perfect example.

Drawing from his experience and training in outdoor survival, Canterbury started the Pathfinder School, which eventually led to Self Reliance Outfitters—a one-stop resource for hand-selected survival and camping gear. So, it would only make sense that the Pathfinder Knife Shop would follow to round out Canterbury's offerings.

No survival kit is complete without a good knife, and Pathfinder Knife Shop has been offering some great entries into this field. Its newest product is the Scorpion, a hardy, mid-sized bushcrafting knife with hard use in mind. The Scorpion is a solid workhorse with simple elegance and style at an affordable price point.

### **SHEATH**

I am not a personal fan of the dangler sheath, so when I saw its fixed belt loop, I was really happy about this more-traditional styling. The sheath features high-quality, thick, brown leather with white stitching, setting the Scorpion in the right direction for me. Because of the sheath's first-class construction, I feel it will last as long as the knife, itself, and will only look and feel better as it breaks in over time.

### **SCALES**

When I drew the Scorpion from its sheath for the first time, I noticed its black micarta with red trace scales. The red trace makes the scales look brown, with a very nice wood grain look. I thought this was a great touch: the classic style of wood with the longevity of micarta.

The Scorpion felt a little squared and blocky to me when I picked it up for the



› A nice start to the author's tinder pile

first time, as if it had been designed for someone with very large hands. I wouldn't have minded a bit more of an ergonomic design for a more comfortable fit, added comfort and decreased fatigue during extended use. Nevertheless, the fit isn't bad enough to be overly uncomfortable or unwieldy.

### **BLADE**

The Scorpion lists as a scandi grind, but I would consider it more of a modified scandi due to the slight secondary bevel. It isn't pronounced, but the primary bevel doesn't continue all the way to the cutting edge. Rather, it begins a slight curving to include a convex grind at the primary edge. I was actually kind of glad to see this—although I do like scandi grinds, I tend to make this same modification to any of my knives that feature full scandi grinds for added strength during hard-use tasks but still maintaining the benefits of the thinner primary bevel.

The Scorpion is a workhorse. It uses 0.125-inch-thick 1095 high-carbon steel with a 90-degree spine and has an overall length of 9 inches. Its blade measures 4.25 inches and features a blued finish that wears well and looks great.

### **PROFILE**

The Scorpion's tip centers very nicely, with a natural grip that is a result of its slight





◀ The author got a clean cut on this half-inch climbing rope.

angle and the almost indistinguishable drop point. Due to the thickness of the scales toward the butt, the balance is just behind the index finger, which gives it more weight in the hand than on the blade.

Although it is a matter of personal preference, I wouldn't have minded the blade being slightly more forward—at the index finger—which would have given it a livelier feel. In addition, it would put a little more of the work on the blade and less on the hand.

### FUNCTION

Of course, no knife can be properly reviewed straight out of the box. The only way to truly know how it will perform is to get it out into the field and give it some solid use. I was quite happy with the Scorpion's performance for all the tasks I put it through.

### BUSHCRAFTING

During camp setup, I used the Scorpion for many and various tasks, such as clearing small limbs out of the way, among many others. The most common chore I usually take

care of during setup is making stakes for my tarp and hammock. I don't like to carry stakes in with me, because they make for unnecessary extra weight. As a result, I make them when I arrive at my destination.

Because my son accompanied me on this trip, I had to make the stakes for both of our hammocks and tarps—a total of 12 stakes. The Scorpion had enough weight to use it in a chopping motion to rough out the points before getting more detailed and whittling them to finer points. I was then able to use a light baton to start the groove for my notches.

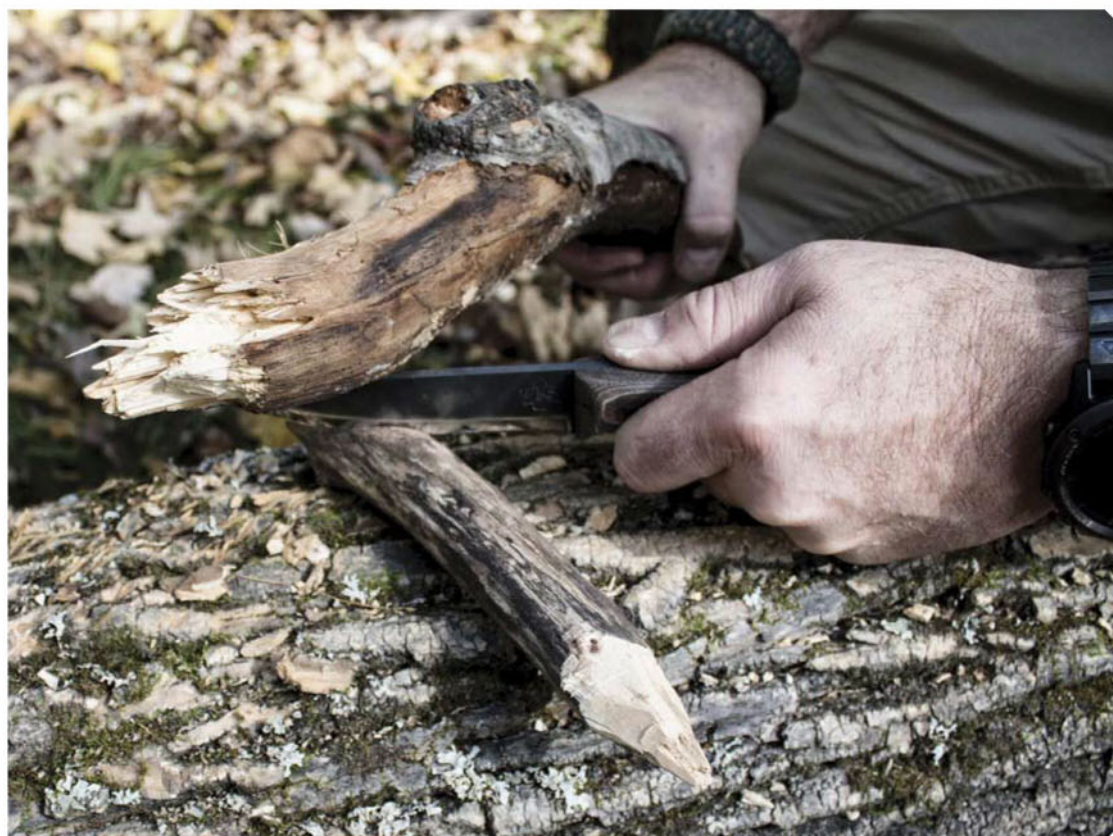






› Above, left: Roughing out the point for a stake

› Above, right: Refining the stake point



› Right: The author used a baton to create the start of the stake notch.

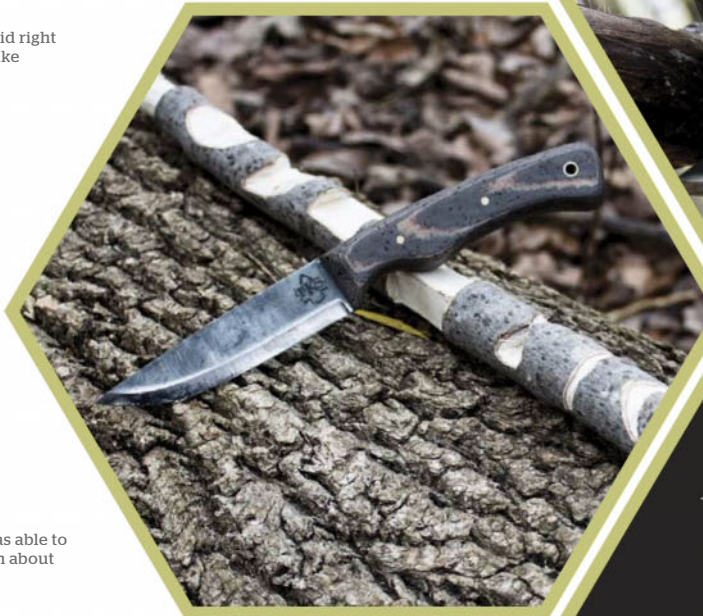
› Below, right: Carving out the notch for the stake

***“THE SCORPION HAD ENOUGH WEIGHT TO USE IT IN A CHOPPING MOTION TO ROUGH OUT THE POINTS BEFORE GETTING MORE DETAILED AND WHITTLING THEM TO FINER POINTS. I WAS THEN ABLE TO USE A LIGHT BATON TO START THE GROOVE FOR MY NOTCHES.”***





➤ *Far right:* The Scorpion slid right through smaller logs to make kindling.



➤ *Near right:* The author was able to carve a decent “try stick” in about an hour.



## Scorpion

### Specifications

- Material:  $\frac{1}{8}$ -inch 1095 high-carbon steel with 90-degree spine
  - OAL: 9 inches
- Blade: 4 $\frac{1}{4}$  inches; blued
- Handle material: Black micarta with red trace
  - Grind: Scandi
  - Weight: 6.7 ounces
  - Sheath: Leather or Kydex
- Knife manufacturer: Pathfinder Knife Shop (PKS)

**MSRP:** \$99.95

Thanks to the Scorpion's versatility, I was able to get the 12 stakes done in roughly half an hour.

Another good test of any bushcrafting knife is the Mors Kochanski “try stick” because of the different methods of cutting required in bushcrafting. The Scorpion's modified scandi grind really created smooth cuts and made for short work on the try stick; in fact, I was able to complete the entire stick in about an hour.

The knife's thicker handle scales did feel a little big in my hand during this phase of testing and were a touch on the uncomfortable side. And although I could feel slight fatigue during extended use, I did not develop any hot spots.

### FIRE PREP

With a little light batoning of some smaller, pre-cut limbs, I was quickly able to produce a nice pile of kindling needed for the next few days. The Scorpion's 4.25-inch blade allowed me to process some fairly decent-sized pieces, thereby cutting down on initial prep work.

Once I had my kindling, I was able to pull a few pieces out of the pile and begin work on a tinder pile (similar to a “fuzz stick.” However, I like to make a pile instead of a stick so I can use what I need and save the rest for a future fire). I was able to get a very good pile of tinder with very little effort.

I then used the Scorpion's 90-degree spine to get a good strike from a ferro rod. I generally prefer to use a dedicated ferro rod striker for safety reasons, but if a dedicated striker is not available, the Scorpion will work well.

### GENERAL TASKS

During this trip, the Scorpion came out of its sheath for more tasks than I can remember—cutting cord, opening packets and a plethora of general camp chores among them. I was very happy with its performance and eventually almost forgot I was reviewing it, because it easily fit into my own set of camp tools.

I didn't have any rope with me on this trip, so when I returned home, I performed my rope press cut test on some half-inch climbing rope. I pressed the Scorpion through the rope to see how well it cut. It performed admirably, slicing right through the rope with only a little pressure on its spine.

### ACCESSIBLE AND READY FOR WORK

When I first received the Scorpion, I was immediately impressed with its subtle beauty: great lines, beautiful layering in the micarta scales and simple, yet functional and durable sheath. I couldn't wait to get it out into the field. And once there, I wasn't disappointed.

I mentioned the thickness of the Scorpion's scales earlier, but they won't stop me from keeping this knife in the most-used portion of my collection. I will definitely be taking it

into the field for plenty more use in the future.

The Scorpion was very comfortable on my waist because of its overall length of 9 inches and a weight of 6.7 ounces. It was easily accessible and ready to work.

If you are in the market for a great bushcrafting knife in the 4- to 4.5-inch range, I recommend the Scorpion. It is obvious that a lot of thought and experience went into its design and manufacturing. With a price point of only \$99.95, its quality far exceeds its cost. **ASG**

### MORS KOCHANSKI

Mors Kochanski, of Saskatchewan, Canada, is a wilderness survival and bushcraft expert and instructor with a global following. Kochanski has authored many wilderness survival and bushcrafting books and developed the “try stick,” a method of practicing knife skills and various carving styles used in typical camp settings and bushcrafting.

### SOURCE

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# LURE FISH TO ***YOUR TABLE***

**IF THE FISH AREN'T BITING WHAT YOU'RE  
OFFERING, CHANGE TACTICS**

BY DANA BENNER



In a survival situation, the surest way to secure protein is by fishing. Traps are hit or miss, and hunting is a low-percentage proposition. If you are expending more energy (calories) than you are taking in, you are in deep trouble. I feed my family on what I can hunt, catch or grow, so fishing is a means of long-term survival.

Fishing for me is not a sport. It is a means of putting food on the table. To that end, I will use whatever legal means meet my needs, whether with a fly rod, lures or live bait.

What follows is what I use to get the job done and how I do it.

### TAKE ADVANTAGE OF EVERY SITUATION

When it comes to securing food, I will take advantage of every opportunity. Sometimes, that means working a day on a lobster boat ... with crabs and lobster as payment. Other times, it involves taking a few moments to fish a small stream. Every fish caught is a meal that equals one more day of survival.

I travel a great deal, and I carry fishing gear and a Yeti Hopper cooler everywhere I go. You just never know when that opportunity will arise.



◀ The right gear for the job will make your life easier and more productive.

**“... IT IS NOT THE EQUIPMENT THAT CATCHES THE FISH; IT IS THE PERSON USING IT.”**

### FIGURE OUT WHAT THE FISH WANT

The difference between a sport fisherman and me is that I am always thinking like a predator. Wild predators are always weighing out the idea of getting the most return for the energy expended. Don't waste yours. If the fish aren't biting what you're offering, change tactics. If nothing works, change location and start again.

When I arrive at a fishing location, the first thing I do is size up the situation. I look at how the water is running: Is it fast or slow? Is the water warm or cold? Is it clear or choked with weeds? Are there fish-eating birds (herons, eagles, osprey) hanging around? These birds are indicators of prey in the area.

All these things will tell you what is going on. It is like learning to read the sign left by land animals. Once that is complete (which only takes a few minutes), I then figure out what the fish want. However, even on bodies of water I frequently fish, things change. Every day is a new day.

A case in point involves when I was fishing the Ammonussuc River in New Hampshire. The last time I was there, live bait, specifically worms, worked the best for me. So, I started out using worms. I fished it slow, but nothing happened. Then, while reeling in for another cast, a nice brook trout took the worm. This told me everything I needed to know, so I switched over to using spoons.

I started with a 1/16-ounce Thomas Colorado spoon in chrome/gold. Although it got bumped, there were no takers. I then switched over to aww 1/16-ounce, bronze-colored Acme Lit'l Cleo. The same thing happened. I increased the weight of the spoon to 1/8 ounce, which gave me greater casting distance and made the spoon sink quicker.

Using a bronze/maroon Lit'l Cleo, I started getting violent strikes. This told me that the fish were deep, and they wanted something flashy and fast. Three casts netted me three fish—two rainbow and a brookie. The limit is five fish or 5 pounds, whichever is reached first. I left with four fish. My return was worth the energy spent.

Don't leave fish to find fish. Work an area until the fish stop biting or until you're satisfied with what you have caught. That means working every angle of the area. You might need to switch tactics, but remember: energy and time spent versus the rewards. Moving from one area to the next expends both time and energy.





## EQUIPMENT

It is very easy for anglers to get caught up in all the hype behind fishing. I actually think most fishing equipment is meant to catch more anglers than fish. Don't get caught up in "the latest and greatest." Why buy a \$300 rod when a \$100 rod will do the job you need it to do and do it just as well?

Quantum, Zebco, Shakespeare, Abu Garcia and others all put out great rods and reels. Pick the one that fits your budget and your needs. Remember: You are fishing to feed your family and yourself. You are not trying to land on the cover of some fishing magazine.

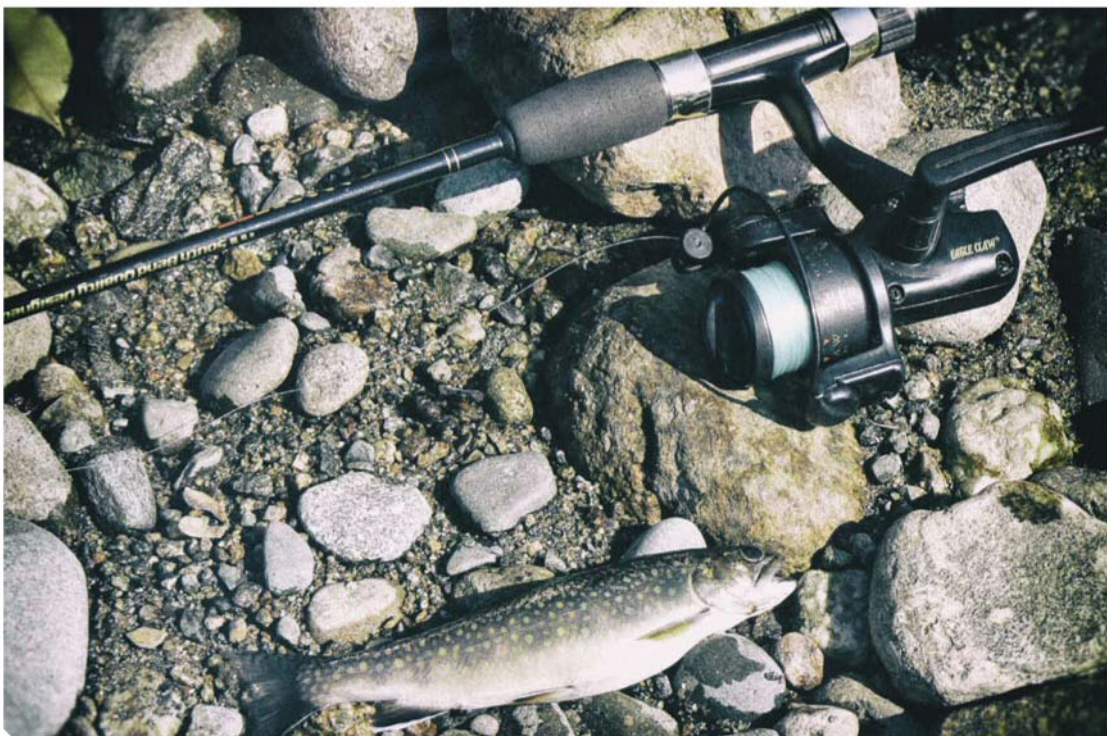
## FLY ROD

Here, in New England, many of the best trout waters are "fly fishing only," so learning to use a fly rod is a must. As with every other type of fishing, an angler can be suckered into spending a great deal of money on equipment. However, it is not the equipment that catches the fish; it is the person using it.

Here is what I use for fly fishing gear: My fly rod is an 8-foot #5/6 Pflueger. I have two reels: a Shakespeare #1094 and a Pflueger Summit. One is spooled with floating line and the other with sinking line.

The term, "match the hatch," comes into play here. While I don't know the names of the different flies, I can pick out the ones that look like what the fish are feeding

***"IF YOU ARE CONFIDENT WITH YOUR ABILITY AND YOUR GEAR, YOU WILL CATCH MORE FISH, WHICH MEANS YOU GET TO EAT AGAIN."***



◀ Learn to read the water. It will tell you how to fish it. In this case, the author would cast a spoon or inline spinner upstream and retrieve it through the slack areas around the rocks.

◀ Always carrying his fishing gear allowed the author to catch this brook trout from a roadside stream. Remember to take advantage of all opportunities.





GETTY IMAGES/OWEN KAY; KARL WEATHERLY

➤ Above: Fishing for survival means thinking like a predator. Always work an area well, and if one method doesn't work, try another.

on. Are they eating flying insects on the surface of the water (dry or wet flies); insect larvae (nymphs); small baitfish (steamers)?

Once you have figured that out, you have to decide how to fish the water. Are the trout in a deep hole, feeding on insect larvae or baitfish? If so, this might be a good place to use a sinking line. If the fish are in shallow, moving water or are feeding on surface insects, perhaps a floating line is best. The entire process is really not as difficult as some "purest" fly anglers would like you to believe. Once again, you are not there to impress other

➤ There are flies for every occasion.



WAS LEBENWEIER



GETTY IMAGES/OWEN KAY; ME; IMAGES/PHOTODISC



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◀ A fly rod and a small box of flies might be all that is needed. Learn to use a fly rod, because this tool is just one more way to put food on the table. This small box is also perfect for carrying lures, hooks, etc.





anglers with your gear and skill; you are there to put food on the table.

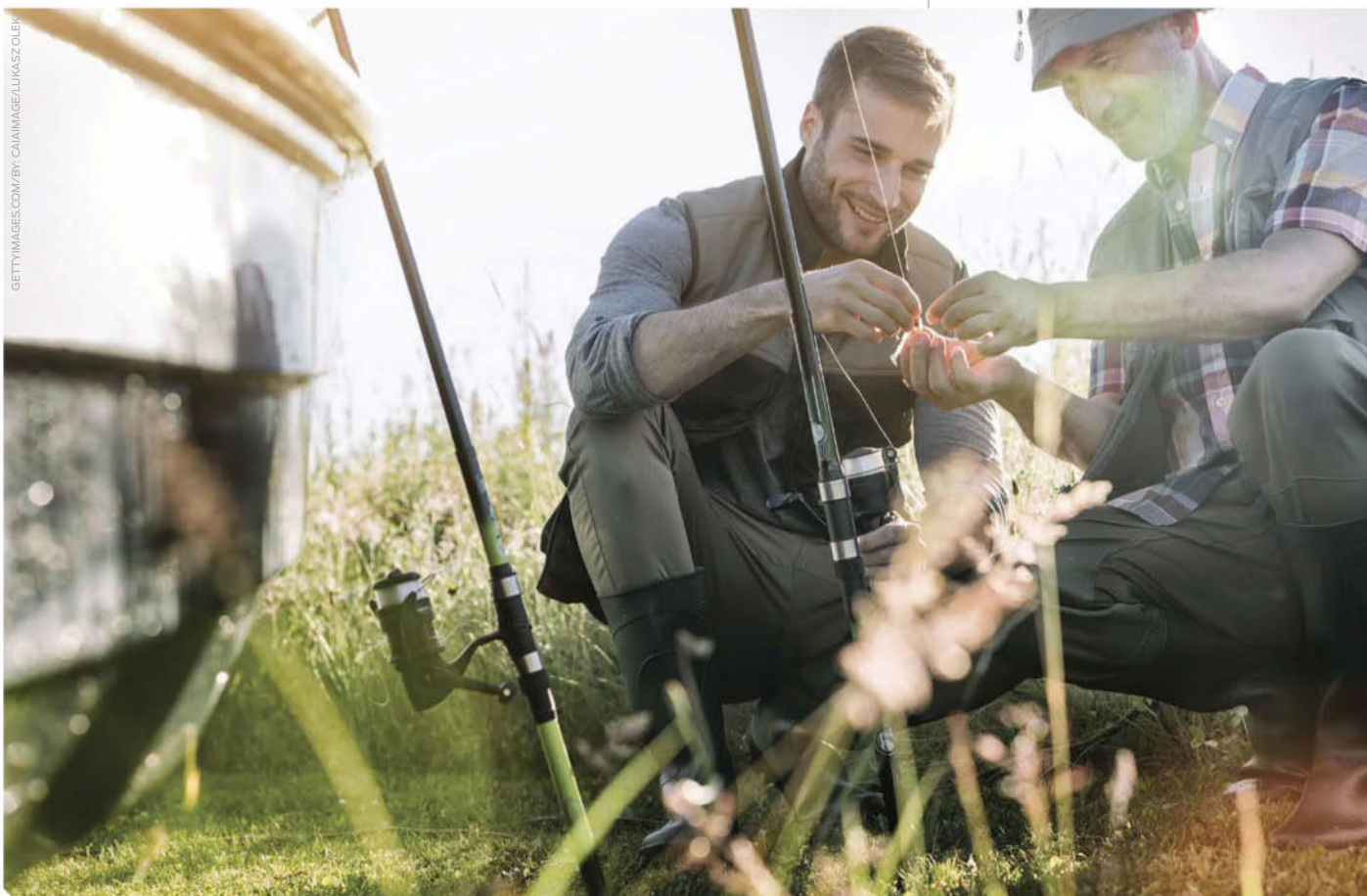
### LURES AND BAIT

The question about when to use lures or bait is one I face whenever I go out. Sometimes, the fish want a fat worm fished slowly; sometimes, they want something shiny that is moving fast. Each time out will be different. Go prepared for both, and be prepared to switch when needed.

There is no need to load yourself down with a huge tackle box filled with stuff you will never use. There are small, easy-to-carry plastic boxes on the market that force you to carry only what you really need. I keep one of these boxes in my truck and one in my bag at all times. They hold the things I will need for most situations, such as hooks, sinkers, spoons, jigs and inline spinners.

### RODS AND REELS

Use the proper tool for the job. Larger fish usually require heavier tackle. Catching large fish on light tackle is not the most efficient way of doing things. Fighting large fish on light gear, while it



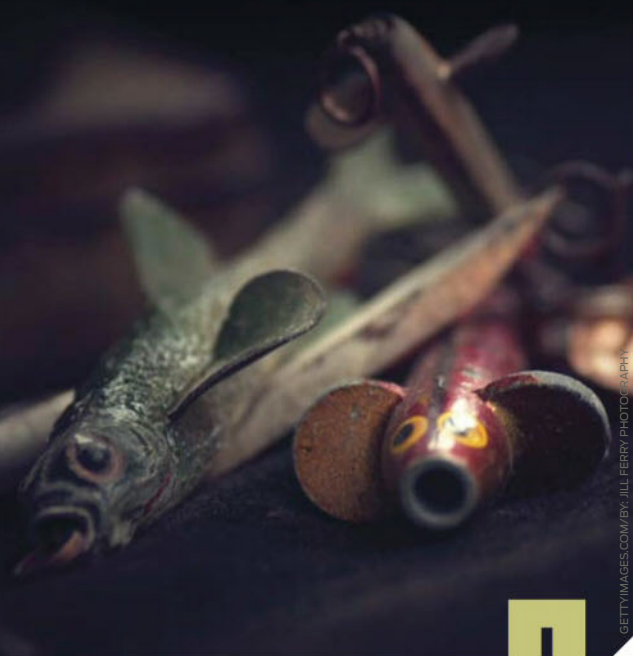


# MUST-HAVE LURES

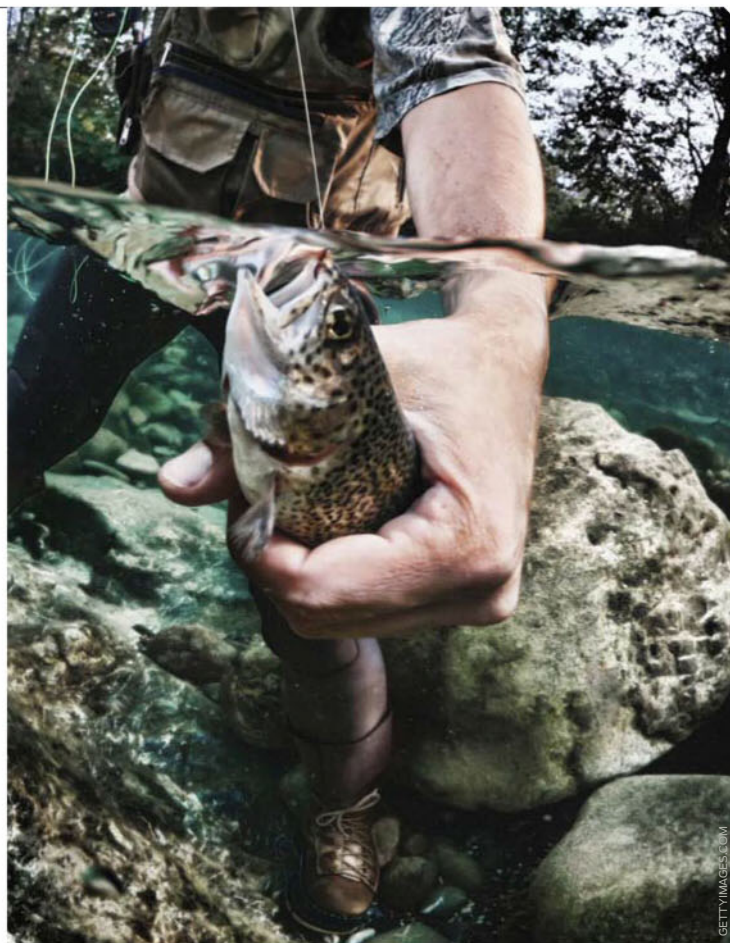
**Spoons:** Spoons, which are basically nothing more than a bent piece of metal with hooks, come in various sizes. They will work with every type of fish—ocean or fresh water—striped bass to bluegill. A spoon is always my go-to lure.

**Inline Spinners:** Like spoons, everything likes these lures ... most of the time. They come in various sizes and colors. A revolving metal blade is what gives this lure its flash and vibration.

**Jigs:** A jig is basically a piece of lead (or other metal) with a hook in it. Jigs come painted or nonpainted and in various sizes. Tipped with a worm, minnow or a soft plastic grub, they are deadly on everything from panfish to walleye.



GETTYIMAGES.COM/BY JILL FERRY PHOTOGRAPHY



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***“FISHING FOR ME IS NOT A SPORT. IT IS A MEANS OF PUTTING FOOD ON THE TABLE. TO THAT END, I WILL USE WHATEVER LEGAL MEANS THAT MEET MY NEEDS, WHETHER THAT IS WITH A FLY ROD, LURES OR LIVE BAIT.”***

can be done, takes more finesse and more time. My goal is to always catch the fish as quickly as possible.

When I fish for trout, whether in a stream, river or lake, I like to use spinning gear with reels spooled with 6-pound test line. While 6-pound test might seem like overkill to some, it is not only the fish I need to worry about, but rocks, sticks and other debris that also might be in the water. Longer rods give you greater casting distance and more control.

For lakes and wide rivers, I prefer medium-action rods measuring about 6 feet in length. For smaller rivers and streams, I like to go with a 4- or 5-foot rod. If I am fishing for bass, pike, lake



GETTYIMAGES.COM/BY JILL FERRY PHOTOGRAPHY



trout, salmon or larger lake walleye, I will go to larger gear. I like to use 6- to 7- foot medium- to heavy-action rods matched with bait-casting reels spooled with 10- to 14-pound test monofilament.

## LINE

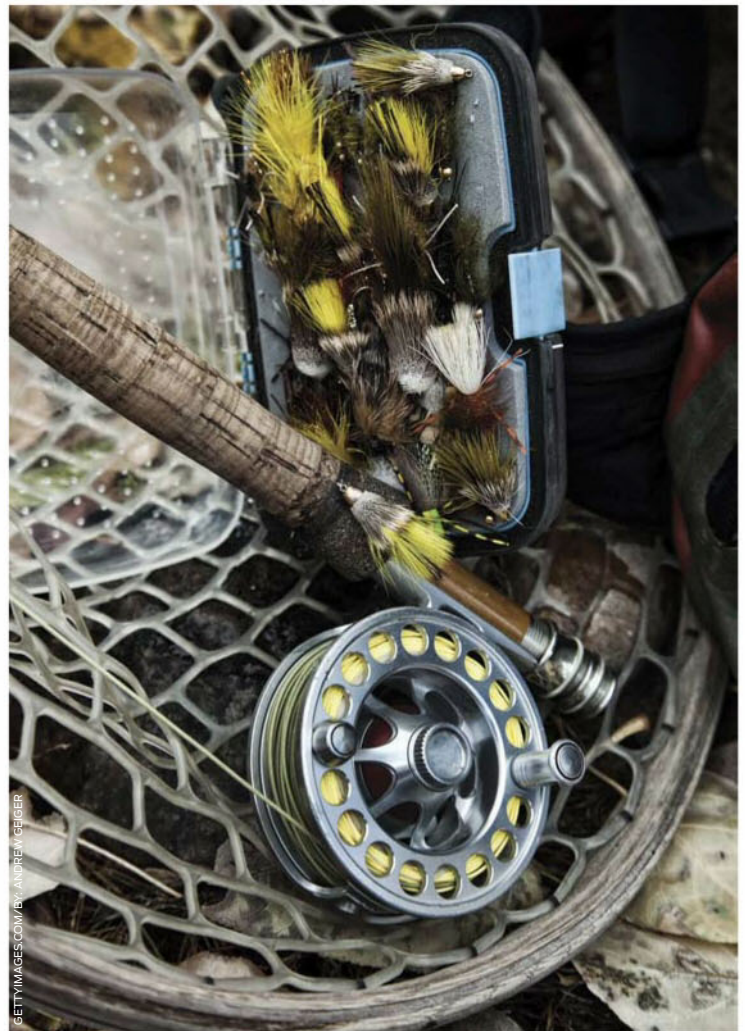
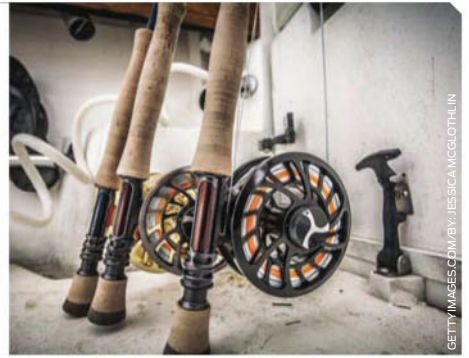
You can do everything right, but if you have bad line, all is lost. I change my line every year, and most of the time, I use monofilament line put out by either Berkeley or Stren. Always use the proper sized line for the rods and reels you are using. That information is marked on both the rod and the reel.

If you are going to fish for food, you need to keep your gear simple and become proficient with it. I have had most of my gear for many years. Much of it is a mix of different stuff—taking the best pieces and putting them together.

If you are confident with your ability and your gear, you will catch more fish, which means you get to eat again. No matter what equipment you use or how you use it, always remember that you need to weigh out time and energy spent versus reward. That is the key to living off of the land. **ASG**



➤ Get to know the flies and line that work for you.







# A PROPHET & A SAVIOR

**SOG'S NEW PROPHET 33 PACK IS A PERFECT  
PLATFORM FOR A GET-HOME BAG THAT  
MIGHT JUST SAVE YOUR LIFE ONE DAY**

TEXT AND PHOTOS BY GARRETT LUCAS







➤ Although extra weight decreases speed, the Prophet 33 does offer a way to carry longer items by securing internal straps and the side flaps around objects such as rifles, fishing rods, bows and even an axe.

**“... IF A CATALYZING EVENT OCCURS IN THE WORLD, THERE’S A HIGH PROBABILITY WE’LL BE AWAY FROM HOME WHEN IT HAPPENS. THAT’S WHY HAVING A GET-HOME BAG WITH YOU AT ALL TIMES IS IMPORTANT...”**

**W**hile the average home is the fixed shelter for each family’s members and the rally point

at the conclusion each day, it’s well worth considering that a tremendous amount of time is spent away from the place that contains everything we need on a daily basis.

If you consider a 40-hour work week (more, for some folks), along with daily commutes, shopping excursions, trips to the doctor, baseball and soccer games, seeing friends and relatives and all the other destinations we visit, it’s not a stretch to realize that we spend more than half our time away from home.

This is important, because if a catalyzing event occurs in the world, there’s a high probability we’ll be away from home when it happens. That’s why having a get-home bag with you at all times is an important and prudent step in the process of being prepared for what might come your way.

And the basis of a robust get-home bag is a quality pack that will carry the gear you need to survive during your trip home.

#### **THE PROPHET ARRIVES**

Such a pack came to my attention on a blustery day in a Nevada desert back in January. SOG Specialty Knives and Tools had a table set up on Media Day during the SHOT show to display the company’s new line of backpacks.

One that caught my eye in particular was the Prophet 33 pack, which is currently available in black or gray. The Prophet is touted as having a 33-liter capacity; that translates to about 2,014 cubic inches of storage. The Prophet is also designed to transform from a pack to a duffel bag—handy when traveling or in environments





› *Far right:* The large, quick-pull zippers are easy to locate and work with while loading and unloading the pack's compartments.

› The bottom of the pack has an additional pocket to store gear away from the load. This is another place the user might want to keep gear that's frequently needed. The pocket feeds into the main pack, so whatever space is used in the bottom pocket will take away from the space inside the main compartment.

in which a backpack might stand out.

The shoulder straps and the belt tuck away into a sleeve on the back side and, when stowed, the pack lays flat with a duffel-style carry strap on the front side. You can carry it to your office, and it would easily pass as a gym bag—especially the version in gray.

### A GET-HOME BAG'S ROLE

The more one handles and uses the Prophet 33, the more apparent it is that this particular pack would make an excellent foundation for a get-home bag. Features such as its size, appearance, easy access to storage areas and quality are ideal attributes to fit the mission role of such a pack.

For the uninitiated, it's important to understand the role of a get-home bag to appreciate the value of a pack such as the Prophet 33 serving as the carry platform.

Most are familiar with the concept of a bugout bag: It's the one you have ready to go when you leave home and is stocked with a sufficient amount of quality gear to sustain you for a period of time. That could be three to five days; or, if the right gear is selected, it could help a person survive on a more long-term basis—although also having the knowledge to use the gear is paramount.

A get-home bag is different in its role and objective. It is designed to be kept with the owner (usually in a vehicle) at all times in case an emergency event occurs when he or she is away from home. The intention is to help the individual make it home on foot when they are within one or two days' walking distance. Whether the person is at work or at a shopping mall, the thinking behind a get-home bag is to support someone within a radius of approximately 30 miles.

Ideally, a fit individual can travel about 15 to 20 miles a day. Of course, a catastrophic event could create numerous obstacles that might shorten each day's travel distance to less than the ideal standard. Even so, the pack is meant to be light for quick movement and should carry only the essential gear needed to make it home.

While the Prophet 33 wasn't necessarily designed to be a get-home bag, it fills that role quite nicely. It's a sufficient size to carry the essential amount of gear needed, and it's rather innocuous looking and won't scream "Tactical!" to passersby. And in the duffel-bag mode, it stands out even less.

### THE PROPHET 33'S FEATURES

Constructed of Kodra 500 nylon that is both durable and water-resistant, the Prophet 33 offers a host of features that make it a versatile pack/bag. It includes padded shoulder straps with a sternum strap and a padded hip belt, as well. These work in concert to place the weight of the load on the hips rather than just the shoulders. Once everything is

› *Above:* To help stabilize the load, the compression straps and side flaps can be pulled in snugly to eliminate open space in the pack that could allow the gear to shift around.

adjusted properly, the pack is very easy to stabilize and carry for long distances.

The back of the pack has an interior sheet of polyethylene with a 15mm aluminum stave to protect the user against the contents of the pack and to help evenly distribute and support the weight of the pack. Included in the pack's interior is a hydration bladder sleeve with pass-through apertures at the top of the pack for the water tube (although you'll have to purchase your own hydration bladder separately).

The pack has what SOG calls a Quad-Zip system that allows user access to the interior of the pack from all four sides. This is a well-thought-out design and makes the pack easier to load and unload without necessarily having to go into the pack from the top. Top-loading packs require the user to unpack the stuff on top to get the gear on the bottom; this is not the case with the Prophet 33. The user can unzip one of the sides to access gear at the bottom, which saves time and precludes unnecessary effort with packing and re-packing.

The Prophet 33 is also replete with a



**“FOR A FIRST TRY AT A LINE OF PACKS, SOG CHECKED OFF ALL THE BOXES AND BUILT A ROBUST SYSTEM THAT IS AS STRONG AND AS WELL APPOINTED AS IT IS VERSATILE.”**

number of different fixtures on the outside of the pack to make using and customizing it easier and faster. There are large zipper pulls that are easy to locate and use. Compression straps with fast-connect buckles help stabilize the loads and reduce the profile of the pack when there is empty space inside.

Along with the duffel-style carry strap, there is an additional carry strap at each end of the front of the pack that makes it easier to load into vehicles or to maneuver the pack in general.

## **SOG Prophet 33 Bag**

### **Specifications**

- Color: Black or gray
- Capacity: 33 liters (approximately 2,014 cubic inches)
- Carry type: Pack/duffel
- Weight: 54.8 ounces
- Dimensions: 24x11.8x9 inches

### **MSRP**

\$229.99



› Rather than having to go in from the top only, the Prophet 33 has entry points on the side to make it easier to access gear at the bottom of the pack.



◀ The Prophet 33 pack comes complete with padded shoulder straps and a padded hip belt to help place the weight on the hips. Additional webbing and attachment points on the straps allow the user to clip on or lash small items to keep them handy during use.



◀ Far left: The top of the pack offers an impact-resistant clamshell pocket to keep smaller items readily available and to protect more-delicate gear, such as GPS units and phones.





***“ ... IF A SMALL-TO-INTERMEDIATE PACK IS ON YOUR BUY LIST, YOU OWE IT TO YOURSELF TO CHECK OUT THE SOG PROPHET 33.”***

On each side of the Prophet 33 is a panel that allows users to secure longer objects, such as fishing rods, rifles, bows or even an axe. That is a great option to have for sporting activities in the outdoors. (However, the user might want to watch unnecessary weight when considering what essentials to carry in a get-home bag.)

On the outside of the side panels are

MOLLE-compatible Hypalon panels where additional storage options such as storage pouches can be attached. These can be fast-access pouches that might contain food, first aid kits or anything else you might need.

At the top of the pack is an impact-resistant pocket that allows fast access to more-delicate items such as sunglasses, electronic devices (phones or GPS units) or any additional item you want to keep close at hand. With the large and easily located zipper pulls, this hard-shell pocket can be accessed without taking off the pack.

### **DEPLOYING THE PROPHET 33**

Over the years, I've gone through my share of packs, and each one had its little things that perturbed me. One might not open far enough; one wouldn't lay flat and stay open while packing. The zippers might hang up a little too easily on a few, and so on and so forth.

So far, I haven't found anything about the Prophet 33 that irks me—except that I don't





have two of them.

It's a great pack to build a get-home bag, but I do like the ability to change it over to a duffel bag. I used the Prophet during my trip to the NRA show to carry spillover items I couldn't fit into the suitcase or that I wanted to keep separate for easy access. It was just the right size to accommodate the various sundries and personal items I needed for the show, and it carried quite nicely.

By the time I was finished outfitting the Prophet 33, I had more than enough supplies to see me well beyond just two days. I had a complete survival kit, trauma kit, first aid kit, a couple of different-sized knives, micro-fiber towel, gloves, duct tape, steel water bottle, an 8x10 Sil-Tarp, large Mylar blanket, last-resort belt kit, GPS unit, whistle, extra ammunition ... and a few more items. Keep in mind that the survival kit and the first aid kit had many smaller items—too numerous to list here.

A couple of the items I put together in the get-home bag are meant to be removed from the pack and worn by the user on their pack belt or regular belt. This allows for more space in the pack to accommodate

› Once converted to a duffel bag, the Prophet lays flat and can easily pass for a gym bag. Side entry is still available, and there is a duffel-style carry strap, along with a loading strap at each end to make heavier loads easy to lift and store.

a full water bladder. After the kit was loaded and cinched up snugly, it carried well on the hips and shoulders with very little ensuing fatigue, even after an entire day trying it out in the hills.

For a first try at a line of packs, SOG checked off all the boxes and built a robust system that is as strong and as well appointed as it is versatile. I focused on putting together a get-home bag, but the Prophet 33 can work just as well as a gym bag, a small duffel bag to carry to work or for travel, or it could serve as a pack that you reconfigure each time you get ready for your next outdoors adventure.

No matter what your need is, if a small-to-intermediate pack is on your buy list, you owe it to yourself to check out the SOG Prophet 33. Properly outfitted with essential gear to deal with catastrophic events, it could be a true savior on the road to help you find your way home. **ASG**

## SOURCE

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# THE SEEDS OF SURVIVAL

**IN A TOTAL-COLLAPSE  
SCENARIO, SEEDS CAN  
BE EATEN, EXCHANGED  
FOR GOODS OR EVEN  
REPLANTED FOR FUTURE  
CONSUMPTION**

BY PASCAL BAUDAR







make a living researching and teaching the culinary uses of wild edible plants. 2015 wasn't a good year where I live. It was a terrible year. We had just had three years of drought in Southern California, and the local wilderness looked like the backdrop of a *Mad Max* movie.

I remember hiking with a friend in the local hills near Los Angeles in July. It was close to 100 degrees, and the place was a good representation of how the end of the world would look: Nothing was growing. All the plants that had been so green a couple of months ago were now thoroughly parched by the relentless hot sun and desert temperatures that characterize our local climate. It really looked like a different world—inhospitable, unforgiving ... and surely unsurvivable.

My friend, mildly interested in edible wild plants, looked at me and said, "There's nothing out here; it's just dead, dead and dead!"

And, to all appearances, my friend was absolutely correct. However, to the trained eye, the reality was very different.

## A DESERT PARADISE

Sixteen years ago, I would have agreed with him. But after years of studying wild edibles, that dreadful landscape looked like the loaded aisle of a health food store. I know it's quite a fascinating contrast in evaluation and perception of the environment, but it was actually true!

What made that difference? One word: seeds.

## SEED POWER

Knowledge is power—*survival* power. Lack of knowledge can make you blind to the obvious. I often tell people who attend my wild food classes that once you learn about a plant, you often see it everywhere afterward. It's quite true. I receive countless e-mails and online messages from my students telling me how they "suddenly" see these edible plants everywhere in their environment. The plants were always there, but they didn't have the training to recognize them.

What my friend didn't see that day was the fact that the dreadful landscape was really an incredible scenery, loaded with tiny superfood.

I quickly looked at the dried-up plants around me and could see three types of mustards, lambs-quarter (a type of wild spinach), curly dock (related to rhubarb), wild amaranth, chia, stinging nettles, white sage,



◀ The author forages wild mustard seeds.

black sage ... and the list goes on. All the plants had pretty much dried up and gone to seed.

Nevertheless, in front of me was an incredible volume of nutritious food and flavors and more variety of edible seeds than my local supermarket could even dream of offering me.

It might seem like an exaggerated statement, but it's quite true. Seeds are a concentration of all the nutrients a young plant will need to grow. It's pure, unadulterated life in a tiny space—often loaded with vitamins, oil, minerals, proteins and essential oils. And we're talking high-quality, nutritious food, not survival food.

By studying ethnobotany (the scientific study of the traditional knowledge and customs of a people's use of plants), I discovered that seeds were an essential part of the native diet. I started studying and collecting edible seeds a few years ago.

During my research, I learned that more than 100 edible seeds were collected by various

◀ Primitive flatbreads can be made with foraged seeds and aromatic herbs.





**“... ONCE YOU LEARN ABOUT A PLANT, YOU OFTEN SEE IT EVERYWHERE AFTERWARD.”**



◀ Some foraged edible wild seeds collected by the author

tribes on the West Coast. This was during pre-Columbian times. In modern times, you can probably add another 50 seeds from non-native plants, such as curly dock, several types of lamb's quarter, chervil, amaranth, sedge and more.

### BACK TO THE FUTURE

In modern times, foraging wild seeds has become a forgotten skill. That's really too bad, because they're plentiful all over North America. Locally, native people used them to make various types of mush called *pinole*, which I've experimented with. The flavors were fantastic (after experimenting with possible recipes), and the pinole was definitely a full meal, in itself, that could provide you with good nutrition and energy during the day.

Another use of seed was to create a type of energy superfood by mixing wild seeds, sugar, nuts and wild berries (pretty much identical to the expensive "power bars" you buy at health stores). Farther north, I would imagine that some traditional pemmican recipes could have also included wild seeds.

*Edible Seeds and Grains of California Tribes and the Klamath Tribe of Oregon* is a fascinating, 216-page document you can download for free from the Internet. It's a study of seeds that were collected long ago by ethnobotanists or found inside containers in various caches (seeds were

◀ An energy bar made with local native dates, wild seeds and berries





## SOME OF OUR WILD BREADS/CRACKERS INGREDIENTS



sometimes hidden and stored for future use. Also, seeds were so valuable that they were sometimes used as a type of “money” or unit of exchange in more-primitive societies). It’s amazing how much information can be found online about edible seeds available in your area via a simple search.

### HOW TO BEGIN

If you are interested and just getting started, look for common wild edible plants with plentiful seeds (mustard, lamb’s quarter, curly dock, amaranth, stinging nettles, broadleaf plantain and others). In no time, seeds will become part of your pantry items.

In terms of nutrition, seeds have very definite survival uses. In a total-collapse scenario, seeds can be eaten, exchanged for goods or even replanted for future uses. A large bag of stinging nettles or lamb’s quarter seeds can provide a lot of edible wild greens in the spring.

Seeds have countless culinary applications. They can be used in a mush or porridge, ground into flour and made into flatbreads, placed in stews or soups for added nutrition, used to create condiments such as mustard and can even become an additive in delicious energy drinks. I love using chia seeds in my foraged prickly pear juice. By itself, it is a fulfilling meal. Many seeds, such as fennel, mustard, chervil, coriander and countless others, can be used as a flavoring agent.

Seeds can also be medicinal. For example, milk thistle seeds are known to help support the liver.

### HARVESTING AND STORAGE

There are several methods of harvesting seeds. Very often, it’s a matter of experimenting with the most efficient way to do it.

For example, to collect mustard seeds, I usually place the dried stems that are loaded with seed pods in a plastic bag. Using a stick or my hand, I beat and crush the contents. The seeds and shafts collect at the bottom of the bag. Cut a little hole at the bottom of the bag afterward, and let everything trickle into a large bowl or bucket. Pour the content back and forth from one bucket to another in the wind.

The shafts will blow away, and you will end up with mostly seeds. Some other seeds—lamb’s quarter or nettles, for instance—are better collected by hand, while others, such as black sage, are collected on location by beating the seed pods with a paddle into a large container or basket.

Seeds should be stored in a cool, dry place. Some seeds can contain a lot of oil (flax seeds are a good example) and go rancid if improperly stored. I place my freshly foraged seeds in small paper bags. Many of them still need to dry a little. If you place them in a closed jar,



**“SEEDS ARE A CONCENTRATION OF ALL THE NUTRIENTS  
A YOUNG PLANT WILL NEED TO GROW. IT’S PURE,  
UNADULTERATED LIFE IN A TINY SPACE ... ”**



◀ Wooden bowl with pumpkin seeds, golden linseeds on hemp seeds

GETTY IMAGES.COM BY: DIANA MILLER

they might end up rotting, and you lose your harvest.

Also watch for insects and grubs. Recently, I foraged 2 cups of wild chia seeds in the desert and discovered a lot of small insects mixed in with them. If I had stored the seeds without getting rid of the insects, my harvest would have been lost in a matter of weeks. To get rid of them, I simply placed all my seeds on a large flat plate and into a sunny location for a couple of hours. The insects could not take the heat and promptly vacated.

One of my friends likes to place wild seeds into her freezer for a few hours; this might work well for culinary uses, but it's probably not a viable procedure if you want to use the seeds later for planting and growing food.

#### CAUTIONARY NOTE

As with any wild food, you must *properly* identify the plants and seeds before using them. Some seeds can be extremely toxic or deadly (poison hemlock, datura or castor bean seeds, among others). **ASG**

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# THE KIT GUN: *PETITE PROTECTOR*

**A SMALL GUN MIGHT BE  
ALL YOU NEED**

STORY BY JAMES E. HOUSE

PHOTOS BY JAMES E. HOUSE AND KATHLEEN A. HOUSE



## **“THE MOST APPROPRIATE MEANS TO PROTECT YOURSELF OR OTHERS IS WITH SOME SORT OF FIREARM.”**

It is not always practical or possible to depend on someone else for protection. In some areas, it might not even be possible to call for help.

The most appropriate means to protect yourself or others is with some sort of firearm. Some practical advice on this situation was given many years ago: “There are times when one cannot be burdened with a rifle, and does not care to go far entirely unarmed” (E. Kreps, *Camp and Trail Methods*, p. 64). That counsel is just as valid today.

There are some .357 Magnum revolvers available that have 2-inch barrels. Firing such a handgun with full power loads is too much of a good thing. There are also small pistols chambered for the .45 Auto that weigh 14 ounces. Such guns might be effective, but they are unpleasant to shoot enough to achieve proficiency. Moreover, a .44 Magnum that is 13 inches long and weighs 3 pounds is a bit much to carry while cutting brush around the cabin or picking berries (although it make sense in some areas). Therefore, the focus here is on small guns that are easy to carry and pleasant enough to shoot so that proficiency is obtained.

### **A GUN FOR THE KIT**

Although there are many small handguns available, we offer our thoughts on handguns that accompany us when we choose to be armed but not encumbered. Because we almost always have photographic or camping equipment along, our kit guns must conform to the classic idea of a “kit” gun.

Historically, a kit gun was usually a small-frame revolver that could easily be carried in a pack or with fishing tackle. It was part of the “kit” taken on outings. Such a handgun was often relied upon to dispatch a pesky varmint or perhaps harvest something for the pot.

Although we have other handguns, it is the small kit guns that we take along on



➤ Kit guns have long been popular with people who spend time in outdoor activities. The Ruger SR22 is an excellent choice.



➤ When one must travel light, a Taurus 85UL packs very well.

outings in the forests of Wyoming.

By definition, a kit gun should be small and light. As we have expanded our equipment, there are several kit guns that became favorites. They are worthy of consideration for anyone who wants a small handgun to have available while pursuing outdoor activities in which an emergency may arise.

### **REVOLVER OR AUTOLOADER?**

Small handguns are available in several calibers, but one should choose a gun for the outback for which ammunition may be available in remote outposts. A compact, lightweight revolver provides the ultimate in reliability. Moreover, such a gun is utterly simple to load and shoot.

From the standpoint of safety, a revolver has certain advantages over an autoloader: It is easy to see at a glance whether the gun is loaded, and the visible hammer makes it evident whether the gun is about to be fired. However, for firing quickly, it is necessary only to pull the trigger. Given the size and weight limitations of kit guns, two logical choices in revolvers are those of .22 LR or .38 Special caliber.

Semiautomatic handguns are very much in vogue—and for good reason. They are short,





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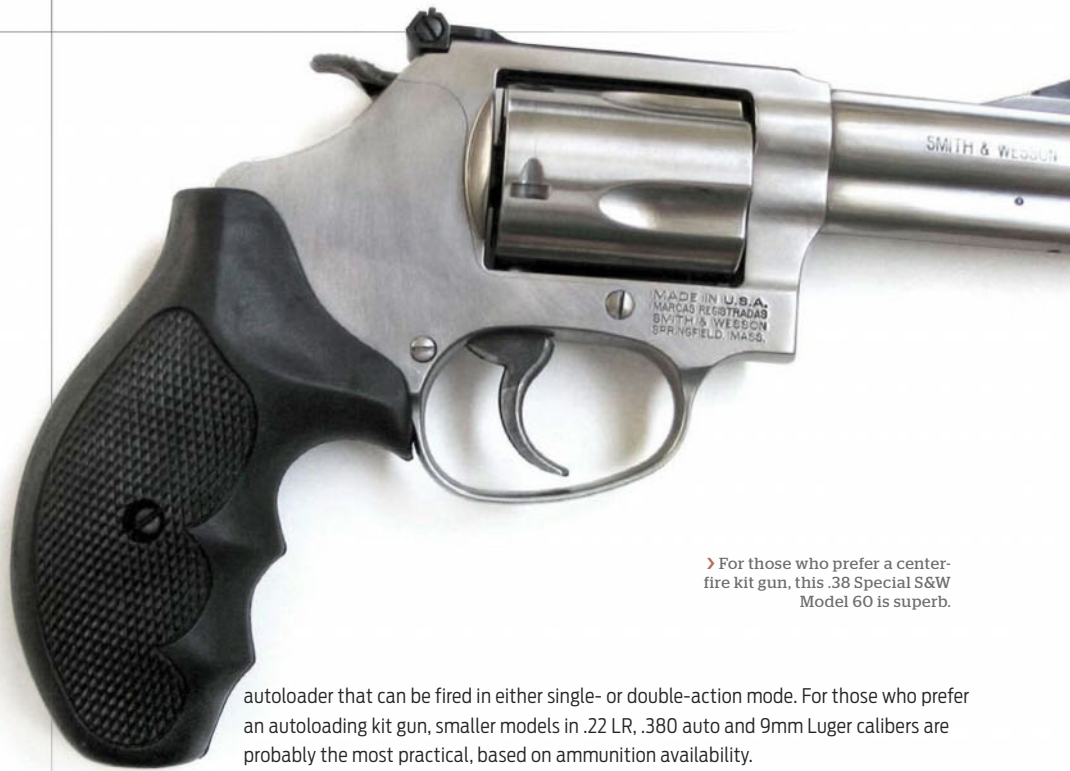
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flat and hold more rounds than do most small revolvers. Autoloaders generally function with complete reliability, and there are three general autoloader types.

The first is a single-action model that must be cocked for the first shot to be fired. Such guns normally have an external safety. Another type of autoloader can be fired in either single-action mode by cocking the hammer for the first shot or in double-action mode by simply pulling the trigger, which cocks the piece and fires it at the end of the trigger motion. The third type of autoloader has no visible hammer, and the piece is fired by simply pulling the trigger, which moves an internal striker to the rear and releases it at the end of the trigger movement. Whether intentional or inadvertent, moving the trigger to the rear causes the pistol to fire, so if a striker-fired pistol is chosen, it is preferable for it to have a safety.

Each type of autoloader has its advantages and disadvantages. Our preference for general carry when engaged in outdoor activities is an



➤ For those who prefer a center-fire kit gun, this .38 Special S&W Model 60 is superb.

autoloader that can be fired in either single- or double-action mode. For those who prefer an autoloading kit gun, smaller models in .22 LR, .380 auto and 9mm Luger calibers are probably the most practical, based on ammunition availability.

## REVOLVERS

In this category, our kit guns include three models, all .38 Special, built on the small frame that Smith & Wesson calls the "J-frame." One is a Smith & Wesson Model 60—a stainless steel version of the Chief's Special that has a 3-inch barrel. That superb revolver is equipped with fully adjustable target sights and target-style hammer and trigger. It is capable of excellent accuracy and is by no means limited to "7-yard" accuracy. This little revolver has accompanied Kathleen in outings for many years.

In recent years, other small revolvers have come our way. One of these is a Taurus Model 85 Ultra-Lite that is built on the same sized frame that is known as the J-frame. Made of a lightweight alloy frame with a steel cylinder and having a 2-inch barrel, the little Taurus is rated for +P .38 Special loads, although it weighs just 16.5 ounces.

Carrying the 85 UL is not a burden, and it adds little bulk to the kit. However, recoil



◀ Far left: Although it is a compact revolver, the S&W Model 60 features superb adjustable sights.



◀ This view of a .38 Special revolver says it all.



◀ Ammunition in .38 Special caliber is available with a wide range of bullet styles, but hollow points are much more effective.



**“SMALL  
HANDGUNS  
ARE AVAILABLE  
IN SEVERAL  
CALIBERS, BUT  
ONE SHOULD  
CHOOSE A  
GUN FOR THE  
OUTBACK  
FOR WHICH  
AMMUNITION MAY  
BE AVAILABLE  
IN REMOTE  
OUTPOSTS.”**

produced by a .38 Special of this weight is quite noticeable. To counteract this, Kathleen chose a steel Taurus Model 85 that weighs 22.6 ounces; the additional weight dampens recoil. Both of these Taurus revolvers have performed flawlessly.



◀ Although heavier than the 85UL, this steel Taurus 85 handles well.

#### **AUTOLOADERS**

There are many who prefer autoloading handguns, and in recent years, we have increasingly used them as kit guns. Two that have become favorites are Bersa Thunder models chambered for the .380 Auto, one of which is the Combat version. The Bersa Thunder can be fired in either single- or double-action mode, and the safety also acts as a decocking lever.

When the safety is on, pulling the trigger produces no action. These little autoloaders are about as safe as an autoloader can be. Barrel length is 3.5 inches, and on the standard model, the rear sight is adjustable for windage; the Combat version is not.

Both models feature white sections on the sights to increase visibility. A three-dot system is utilized on the standard Thunder, but the Combat model has a white insert that completely surrounds the notch in the rear sight. These compact pistols weight 19.7 ounces and have digested many types of ammunition, including handloads, with complete reliability.

An eminently practical kit gun is the Ruger SR22. This 17-ounce pistol is a 10-shot .22 LR that features fully adjustable sights and a 3.5-inch barrel.

The SR22 can be fired in either single- or double-action mode. It has dual safety levers that also function as decocking levers. The grip consists of a sleeve that surrounds the

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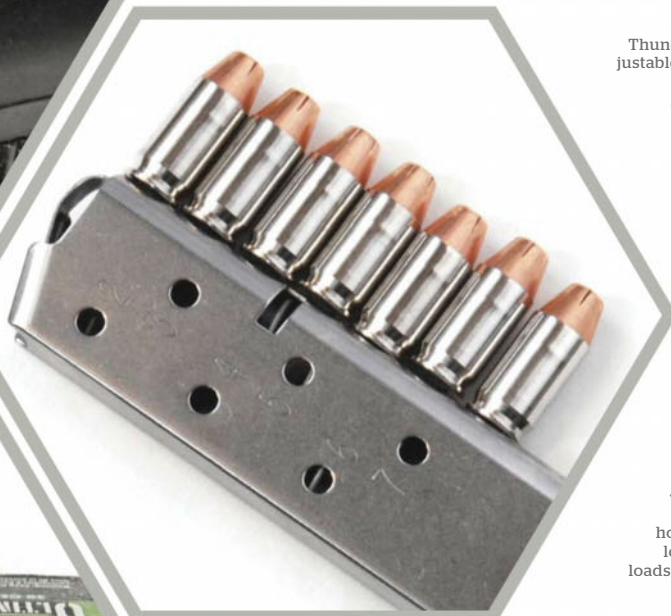


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◀ Far left: The standard Bersa Thunder has a rear sight that is adjustable for windage and white dots.



◀ The seven-round magazine for the Kimber Micro Carry Bel Air is easy to load.



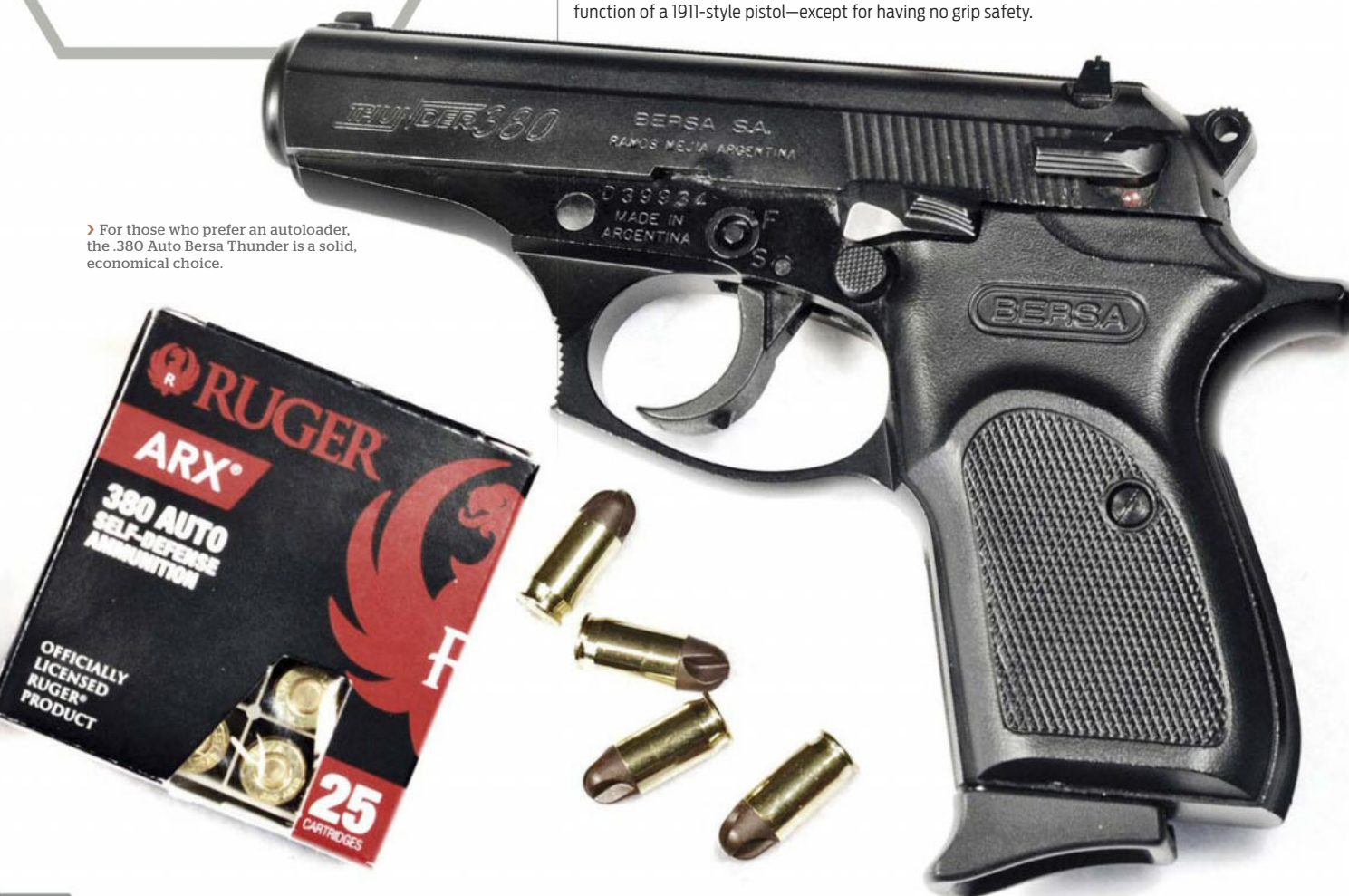
◀ For many years, Remington has utilized brass-jacketed hollow-point bullets in defense loads. The Winchester Defense loads have an excellent reputation for delivering good terminal performance.

grip frame, and the pistol comes with two sleeves of different sizes. As a result, the grip can be altered to suit the shooter.

This little pistol delivers excellent accuracy and functions reliably with all types of high-velocity ammunition. When a rimfire kit gun is needed, the Ruger SR22 is an excellent choice.

Responding to the siren call of a handgun that is a work of art, as well as functional, Kathleen succumbed to the Kimber Micro Carry Bel Air. This petite handgun is a single-action model. It has an external hammer and a safety that blocks the slide, making it mimic the function of a 1911-style pistol—except for having no grip safety.

› For those who prefer an autoloader, the .380 Auto Bersa Thunder is a solid, economical choice.





**“SEMIAUTOMATIC  
HANDGUNS ARE  
VERY MUCH IN  
VOGUE—AND FOR  
GOOD REASON.”**

➤ Elegance and style are readily apparent with the Kimber Micro Carry Bel Air, but it is also a very capable pistol.

➤ The Combat version of the Bersa Thunder features a wraparound rubber grip and a shorter beavertail.

With a 2.75-inch barrel and weighing only about 14 ounces, the Kimber Micro shoots surprisingly well, in spite of having fixed sights. From the start, the shots clustered right at the point of aim. There is no doubt that the Kimber Micro is a superb kit gun.

Although a radical departure from the autoloaders described, another excellent choice is the Glock Model 26 that is chambered for the 9mm Luger cartridge. This is a striker-fired pistol that utilizes a double stack magazine that holds 10 rounds. The Glock 26 weighs 19.8 ounces and has a 3.46-inch barrel.

Although it is a striker-fired pistol that requires a long trigger pull, the movement is smooth, making it easy to shoot accurately. Ammunition in 9mm Luger caliber is widely distributed, extremely varied as to type and is the least expensive of any centerfire caliber.

#### **WHAT TO FEED THE KIT GUN**

The performance of any handgun depends greatly on the type of ammunition used. Gone are the days when handguns had to

be fed round-nose lead bullets or those with full metal jackets. Advances in handgun ammunition have come rapidly as a result of improvements in bullet design.

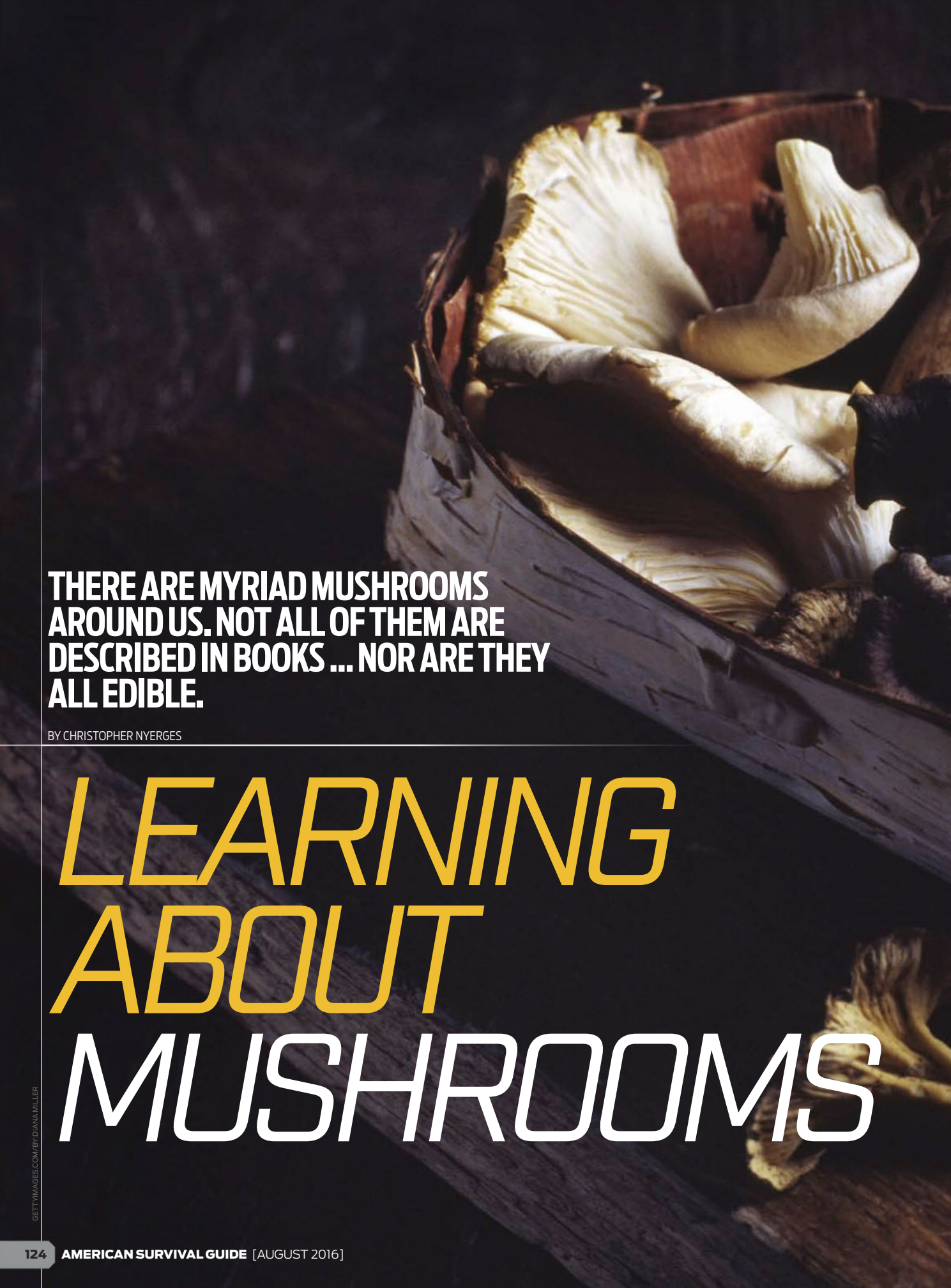
In centerfire calibers such as the .380 Auto, 38 Special and 9mm Luger, most high-performance loads utilize hollow-point bullets. The result is rapid expansion and energy transfer without excessive penetration.

Notable among defense loads in centerfire calibers are the Speer Gold Dot, Hornady Critical Defense and Winchester PDX1. These and other defense loads raise the performance level of centerfire handguns enormously. For use on small pests, shot cartridges are available in .38 Special and 9mm Luger, although they do not cycle in most autoloaders.

Kathleen and I have available larger and more potent handguns, but our kit guns get far more use. The convenience with regard to weight and size makes it possible to take one along when we do " ... not care to go far entirely unarmed." **ASG**







**THERE ARE MYRIAD MUSHROOMS  
AROUND US. NOT ALL OF THEM ARE  
DESCRIBED IN BOOKS ... NOR ARE THEY  
ALL EDIBLE.**

BY CHRISTOPHER NYERGES

# *LEARNING ABOUT MUSHROOMS*









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**M**ycology was the science that obsessed me the most, before botany, and back in the early 1970s, mycologists were few and far between. Besides getting every book on the subject from my local library, I also joined the Los Angeles Mycological Association and spent most weekends in fields and wild areas looking for mushrooms and learning how to identify them.

I was attracted to the somewhat mysterious nature of mushrooms. One day, they are not present, and the next day, you see them

**“THERE ARE OLD MUSHROOM HUNTERS, AND THERE ARE BOLD MUSHROOM HUNTERS, BUT THERE ARE NO OLD AND BOLD MUSHROOM HUNTERS.”**

◀ Pink-gilled *Agaricus* mushrooms are mostly edible and highly prized by cooks.

in the fields. You come back in a few days to study them some more, and they are gone. Mushrooms are very short lived. For this reason, there are not as many qualified mycologists as there are botanists.

Mushrooms appear seemingly at random, based on a number of factors: the season, amount of rain or moisture, and the type of wood, among others. It is just not possible to get to know the wild mushrooms as readily as you can learn about trees or backyard weeds.



◀ Colorful fungi on display at one of the many annual mushroom fairs



◀ When you cut a puffball in half, you can see that it is solid, white flesh.





## STUDYING VS. EATING MUSHROOMS

My Falcon Guides publisher wanted me to include a few mushrooms in my *Foraging California* book, but I decided against including even a few "simple" mushrooms, in part because there are really far too many members of each genus than are ever included in any book; in addition, so many amateurs really have no practical way of knowing these "look-alikes" even exist. (I still read about experts who ate the wrong mushroom—and died, usually slowly and painfully.)

Also, keep in mind that even the best mycology books do not include all the possible mushrooms you might find in your area. If the mushroom in your hand is not found in the book you are reading, you might be tempted to conclude that what's in your hand must be the one in the book. Maybe, maybe not.

There's no harm done if you're just trying to identify the mushroom—and if you don't intend to eat it. But it's an entirely different ball game if you intend to eat that wild mushroom.

There is an old saying: "There are old mushroom hunters, and there are bold mushroom hunters, but there are no old and bold mushroom hunters." Sad, but true.

When I was just starting to study mycology, I insisted on eating every mushroom the old experts identified to me as being edible. Some were good, some were not. I had at least a few unpleasant vomiting sessions. I no longer care to try every "edible" mushroom. In other words: There are a lot of mushrooms out there, and not all of them are described in books. If you want to eat a wild mushroom, learn mycology first and then mycophagy (the study of how to eat wild mushrooms).

So, how do you actually learn about identifying and using wild mushrooms? I don't believe there is any shortcut. You need to get into the field and learn with experts. You can enroll in a class in which you will see the actual mushrooms and/or in which there will also be the possibility of field work.

You should also find a local mushroom society through which you can go on field trips. Then, use Internet sites, videos and books as back-up sources and references to your direct field experience.

## BOOKS

There are some really good books out there. Here are just a few I highly recommend for those of you who choose to pursue the science of mycology ... without losing your life:

*The Mushroom Manual*, by Pearson (Naturegraph, 2014) Both amateurs and professionals will enjoy this book. It does not purport to tell you everything you ever wanted to know about mushrooms. It does, however, give the reader an excellent overview of fungi. It includes the "foolproof four" that anyone can identify and eat, the "fatal five" (deadly mushrooms), the nine basic groups and mushroom identification keys.

*California Mushrooms: The Comprehensive Identification Guide*, by Desjardin, Wood and Stevens (Timber Press, 2015). This book is useful well beyond discussing California mushrooms. You get a good comprehensive overview of the world of mycology, with all the types of fungi broken into their categories and with keys to help you identify the mushroom in hand.

*Mushrooms Demystified*, by Arora (Ten Speed Press, 1986). David Arora is perhaps the man when it comes to mycology. This is a thick book that covers 2,000 species and features more than 800 photos. If this is the only book you had, you'd do well ... and you'd learn that patience is part of studying mycology.

*The Great Encyclopedia of Mushrooms*, by Lamaison and Polese (Konemann, 2005). This is an English version of a German original and is a very good introduction to mycology. If you master this book, you're ready for one of the others.

Remember: You will not learn foolproof mycology from books. You need to go into the field with experts, and you need to find a mentor to guide your study. Books are meant to be your back-up sources. **ASG**

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REVIEW BY DUDE MCLEAN

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# THE TRACKERS FIELD GUIDE

BY JAMES C. LOWERY

"Tracking is not about facts, it's about relationships," says Jim Lowery in *The Trackers Field Guide*.

This book contains a lot of tools for the tracker: extensive notes about the biology of each animal, lots of examples of track interpretation and "track windows," which suggest how your exploration can access an animal's unique personality and biology. If you are a beginning tracker, you will "grow into" some of these tools over time. If you happen to be an advanced tracker, you will find useful tools here that are not found in other references.

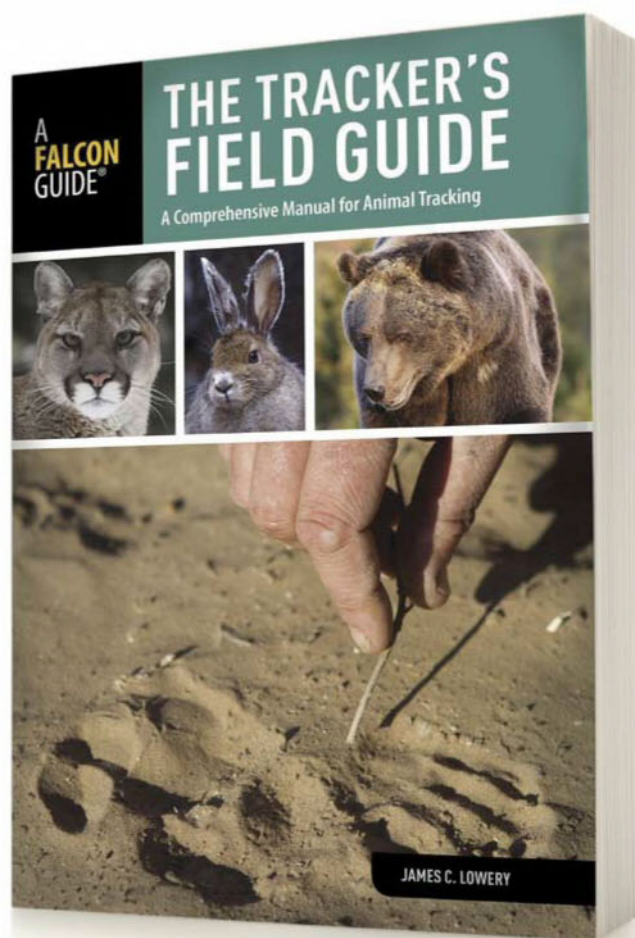
I very much like how Lowery's book eases you into the world of tracking. He sets the foundation for you in the first pages in a clear and concise manner. Hundreds of pictures and illustrations show exactly what is being discussed. The guide covers North America, so you will find useful information wherever you live. You will also learn tracker "jargon."

From the book: "If you are already a tracker, you know what a novice tracker will learn in their first day: The animal whose tracks you just identified is going to call you out. It will tease or yell or cajole until you become discontented with just identifying it and agree to have a conversation with it. You may think you control this conversation by asking questions: Why did you cross the trail here? Where are you going? Why are you traveling alone? Why did you bypass some perfectly good food? Of course, the animal will lead the conversation, because neither you nor any field guide has the answers."

The guide is about tracking, but the book is thought provoking, and that's part of the adventure with this fine work.

Lowery states that he wants the reader to experience the richest interaction possible with an animal. By learning the "tracker's triangle"—single prints, track patterns and soil movement—you will learn to go back and forth among these three elements as you identify the track. After a while, tracking becomes second nature.

I personally have an extensive collection of tracking books from some fine and well-known trackers. And while they are excellent,



I believe Jim Lowery's *The Trackers Field Guide* surpasses them by a wide margin.

Reading a tracking book can become very dry and boring very quickly—no matter how interested you are in the subject.

Lowery's book, on the other hand, is so well done that you want to quickly turn the pages as the lessons come alive. **ASG**



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# WORDS

LAST

## INTO THE WILDERNESS

**"S**urvival" is a broad term that brings us all together in the *American Survival Guide* community.

You've chosen well by deciding to study the pages of this magazine.

The interest in practical aspects of survival is great these days, partly because we have grown so very far from our roots. People out there, somewhere, do so much that we depend

upon in our modern urban life. Someone sees to it that we get water and that the water is clean. Someone else sees to it that electricity is produced and that it comes to our homes. Natural gas is tapped and then piped into our homes. Our garbage is removed on a regular basis and taken somewhere far away. We have all grown very dependent on these "someone else" entities.

Many of us go into the wilderness to experience what it takes to feed ourselves and collect our own water, live in our own little shelter and breathe free, even if only for a short while. We go into the wilderness so we don't lose touch with our primal instincts, which kept us alive and thriving for so long.

Everyone has the deep desire to survive and protect their families. For enlightened individuals, this survival instinct extends to our own particular city, our nation and our world. It is very personal, very real and very strong. It is what we all seek ... and need.

It's really too bad you do not get useful and quality survival skills from watching the countless "survival reality" shows now cluttering up the television channels. It is as if the genuine, deep concern for survival stimulated the more-mundane commercial interests that vitalize television programmers; the result is pablum and titillating entertainment—but not practical, day-to-day survival skills.

And that is too bad. Television is such a powerful social medium and has the potential to do so much good. Unfortunately, the "god" of this world that is worshipped and trusted is still money, as it has been for a very long time, so what you see on TV is not real and generally not useful in the deepest practical way.

Not everything on TV is bad or useless, but you really have to dig deep to find the value, much like looking for that needle in the haystack.

Unfortunately, television "reality" shows have spread the idea that "survival" is about stabbing your neighbor in the back (figuratively speaking), rather than finding ways to work together and cooperate. Shows such as the long-running *Survivor* provide little of any practical value for survival, and it promotes the wrong values for a healthy, sustainable society.

Although you'd barely know it by reading today's newspapers, those (those people and those countries) who have survived the longest—and in strength—are those who have learned to work together with others, who work on self-reliance and who are prepared to fight (but only do so when absolutely necessary).

Those who travel into the wilderness learn valuable life skills. Those skills are also valuable if you ever need to rely on your wits and your gear in the aftermath of a natural or manmade disaster.

We hope you find that the articles we've included this month will make a healthy contribution toward your survival and self-reliance. **ASG**







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